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COLEOPTERA

BY

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I—A REVIEW OF THE NORTH AMERICAN BEMBIDIINÆ.

In almost every considerable collection of the Insecta, there are usually many unworked sections consisting principally of unidentified material. This is especially true of those accumulated by students not having with them assistants to perform the more mechanical work relating to mounting and cleaning specimens and restoring such as may deteriorate through unfavorable conditions in the lapse of time. Among the unstudied sections of the writer's collection, none have been more discomforting than those comprising some subfamilies of the Carabidæ, and the material at hand, though very extensive, has been thus far only partially identified and so comparatively useless. It was therefore with the idea of bringing some order out of chaos that the revisions of the present volume were drawn up, not however without many misgivings as to the attitude to be assumed by those having different conceptions regarding what should or should not be called species. These differences of view will continue, however, so long as our knowledge remains imperfect.

Subfamily BEMBIDIINÆ.

This large and clearly circumscribed Carabid complex has never been the subject of much attentive systematic study in this country, the only monographic treatment attempted thus far being the essays on *Bembidion* and *Tachys* published by Mr. Roland Hayward (Tr. Am. Ent. Soc., 1897, p. 32 and l. c., 1900, p. 191). In these papers Mr. Haywood records as valid 188 species, and adding to these about a dozen more, either unadmitted among those already published, or subsequently described as new, our known species at the time of that author's investigations amounted to about 200. A few have been since published by Fall and Blaisdell. I have made the collecting of material in this subfamily a special object during many years, thoroughly searching through débris along water courses and in the moist mosses of numerous ravines, especially in the Pacific coast regions, and have added besides a considerable number of species taken by Prof. Wickham during his

many wanderings through widely separated parts of the country. The material before me is for these reasons notably full, so that I have been obliged to recognize some 437 species and subspecies composing it, which number must be increased by about 82 that are not at present in my collection, making in all 519 species and subspecies, or about 2.6 times as many as were admitted by Mr. Hayward and subsequent authors. The species and subordinate categories given as valid in the most recent European catalogue amount to somewhat over three hundred. The continent of North America should not, however, be compared faunistically with Europe alone, but with the entire Eurasian continent from the Atlantic to the Pacific, and it is probable that at least some six hundred species are already known from those vast regions of the earth. In spite of these formidable numbers, I feel certain that in both America and Eurasia there are still hundreds of unknown forms to be announced by future systematists. I can at present recall but very few species common to the Atlantic and Pacific areas of North America, and there are not many that can be considered as even subspecifically related to one another.

The genera of Bembidiinæ, so far as concerns the American fauna, may be defined as follows:

Elytra with the sutural stria not recurved at tip, the scutellar stria present except in *Lymneops;* size of the body much diversified 2
Elytra with the sutural stria recurved at tip; scutellar stria wanting; body always very small in size 6
2—Eyes very large and prominent; outer maxillary lobe with the segments free 3
Eyes small or wanting 4
3—Elytra densely punctate, not striate . . . . . **Tachypus** Dej.
Elytra not diffusedly punctate, striate . . . . . **Bembidion** Latr.
4—Segments of the outer maxillary lobe anchylosed; habitus as in *Trechus* . . . . . **Amerizus** Chd.
Segments free as in *Bembidion* 5
5—Eyes wanting, sutural stria not attaining the apex, the scutellar series feebly developed though traceable; body minute, rather narrow. **Anillus** Duval
Eyes present; sutural stria entire, with a trace of apical recurvature, the scutellar obsolete; eighth stria entire but broadly and feebly impressed; body small in size, subparallel . . . . . **Lymneops** n. gen.
6—Eighth elytral stria coarse, deep, entire and foveate; each elytron with six punctured discal striæ, rarely abbreviated at tip; seventh stria completely obsolete; mentum with two very large foraminiform excavations; body convex, with more or less thick integument. **Pericompsus** Lec.

Eighth stria entire but fine, somewhat irregular; each elytron with seven fine subpunctulate discal striæ; mentum with two rather large deep circular foraminiform foveæ; body depressed, the integument thin, the antennæ thick and rather short. . . . . **Paratachys** n. gen.
Eighth stria broadly interrupted medially; discal striæ obsolete, except toward the suture. 7
7—Body oval, convex; mentum without foraminiform excavations. **Tachyura** Mots.
Body depressed, oblong-oval in form. 8
8—Mentum with two foraminiform cavities, which however are much smaller than in *Pericompsus*. . . . . **Tachys** Steph.
Mentum without foraminiform cavities. 9
9—Side margins of the pronotum normal, the edge finely reflexed. **Tachyta** Kirby
Side margins deeply and evenly excavated from base to apex, forming a sharply defined gutter at each side. . . . . **Tachymenis** Mots.

Blemus œnescens Lec., is omitted from the above table of genera and from further consideration at the present time; it belongs to the genus *Micratopus*, defined by the writer (Memoirs Col., V, 1914, p. 42) for a small species—*fusciceps*—from Vicksburg, Miss., apparently differing from *œnescens* in its longer antennæ, these being from two-thirds to three-fourths as long as the body, but in *œnescens* described as half by LeConte, and scarcely half by Hayward, as long as the body. *Ænescens* was assigned to *Lymnastis* by Motschulsky, but the diffused punctures of the entire upper surface in *Lymnastis indica*, the type of the genus, would seem to indicate that *Micratopus* is not the same as *Lymnastis*, although there is possibly a close generic affinity. The third palpal joint of *Lymnastis* is said to be "élargi"; it is only normally inflated in *Micratopus*. With *Tachys*, to which *œnescens* is referred by Hayward, there is no real relationship whatever. We have in fact in *Micratopus* a remarkable type of the Carabidæ, for the single supra-orbital seta would constitute of it an exception in the entire suborder Harpalinæ Bisetosæ if, because of palpal structure, we assign it to the Bembidiinæ, and the subulate palpi would cause it to be a singular exception if placed among the Harpalinæ Unisetosæ. It was this extraordinary condition of relationship that prompted the writer to propose a distinct subfamily group for *Micratopus*. However, on further consideration I am now disposed to believe that, in this case, the loss of one of the supra-orbital setæ—probably due to the extreme retraction of the head—is of less value taxonomi-

cally than the possession of subulate palpi, in connection with a *Tachys*-like habitus, and I would therefore suggest that *Micratopus* form a tribal division of the Bembidiinæ, all the other genera above defined together forming another tribe.*

Tachypus Dej.

In the most recent European catalogue this genus is given the name *Asaphidion* Gozis, but I leave it here under the name by which it will be recognized universally. The only reference to the genus as occurring in America to be recalled at present, is the description of *Tachypus elongatus* by Motschulsky (Käf. Russ., p. 16, note 5), redescribed by Mannerheim (Bull. Mosc., 1853, III, p. 146). It was said to be from the Island of Sitka, Alaska, by Motschulsky, but with a note of interrogation; so *Tachypus* may not be truly established in North America at all. The original type was lent to Mannerheim for description. The prothorax is said to be longer than wide, cordate and canaliculate; it is much shorter than wide in both *caraboides* and *flavipes* of the European fauna.

Bembidion Latr.

This unwieldy genus is essentially northern in distribution, while *Tachys* and allied genera are also abundant in tropical regions. It is well represented however in our Sonoran faunas, but comparatively rare in our southeastern maritime states, and when occurring there the species are nearly always peculiarly isolated, as for instance in the case of *fraternum* Lec., a species wholly unknown to me at present.

The grouping of the species given below is in the main similar to that proposed by LeConte and Hayward, but I have been obliged to modify their conclusions in a number of cases. For instance the species allied closely to *honestum* Say, do not belong at all with *bifossulatum* Lec., but are to be referred to the *ustulatum* group, constituting a part of the subgenus *Peryphus*. Then I have made a distinct group of *erasum* Lec., including a large number of species,

* Since the original description of *Micratopus* was published, I have observed in the type species a regular series of short erect setæ along the entire length of each of the strial intervals, but only visible under a particular angle of illumination and therefore overlooked. These setæ arise from punctures so very minute and feeble as to be barely traceable under considerable amplification.

many of which were referred to the *planatum* group by Hayward. Some assigned to the latter group by that author, such as *nebraskense* Lec., are also to be shifted to *Peryphus*. In the *erasum* group is also included the *iridescens* group of Hayward. *Affine* does not constitute a group but is to be referred to *Notaphus*, where it comes near the Mexican *cognatum* of Dejean. *Tigrinum* Lec., should evidently form a distinct and isolated subgeneric group. As shown by the species *festivum*, recorded further on under the *bifasciatum* group, the replacement of the usual two dorsal foveæ of the elytra by three, as seen in *rickseckeri* and *scudderi*, cannot be made the basis for separate subgeneric groups and these will be found therefore under the *ustulatum* and *variegatum* groups respectively. It should be added that I have also adopted the plan of giving subgeneric names to the various groups, as has been done in the recent European catalogue of Heyden, Reitter and Weise.

Our species may be assigned to the following sixteen groups, all of which seem to be definitely subgeneric in character:

Eighth elytral stria remote from the margin and subsimilar to the seventh stria.....2

Eighth stria much less widely separated from the margin, except in the *nigrum* and *brevistriatum* sections of the *ustulatum* group, sometimes very close to the margin, and, as a rule more coarsely and deeply impressed than the seventh.....3

2—Prothorax subquadrate; elytral foveæ moderate in size, two in number as usual, sometimes within depressed and often more metallic areolæ.....I (*litorale*)

Prothorax broadly cordiform, the two elytral foveæ large and deep. II (*bifossulatum*)

3—Humeri sharply angulate at base, the latter strongly margined for some distance internally; prothorax almost as wide as the elytra, subquadrate.....4

Humeri rounded, sometimes feebly angulate at base, the latter not margined, except by the more or less brief incurvature of the lateral margin, which however is sometimes wholly obsolete, as in the *semistriatum* group.....5

4—Striæ regular and finely punctulate, though diminishing in depth more or less rapidly—and often obsolete—laterad; intervals not punctate; two dorsal punctures distinct and on the third interval; mentum tooth sinuato-truncate at tip.....III (*nitidum*)

Striæ wholly obsolete posteriorly, coarsely punctate basally, the surface also with scattered setigerous punctures but apparently without the usual two dorsal foveæ; mentum tooth short, bilobed. IV (*lævigatum*)

5—Elytral striæ impunctate, rarely punctulate, but then only very finely or imperfectly.....6

Elytral striæ distinctly and normally punctate....11
6—The striæ very unequal to wholly obsolete, always gradually fine to broadly obsolete externally....7
The striæ coarse and deeply impressed, entire; body oblong and very convex....10
7—Elytra never having paler maculation....8
Elytra each with two clearly defined pale spots, the surface very smooth, the striæ frequently wholly wanting....9
8—Body convex, the general aspect in typical forms somewhat as in the *nitidum* group, except that the prothorax is always much narrower than the elytra; striæ only visible or distinct suturad as a rule....V (*erasum*)
Body strongly depressed, oblong, the elytral striæ well impressed and subequally distinct throughout the width, entire as a rule; body usually black throughout, never with distinct metallic lustre.
VI (*planatum*)
9—Body only moderately convex, small, the general aspect as in the *ustulatum* group, the prothorax subcordate....VII (*bifasciatum*)
10—General aspect somewhat as in the *ustulatum* group, the two dorsal punctures at the third stria, as in the three preceding; body testaceous throughout, the elytra with cloud-like dusky maculation, oblong, the prothorax but little narrower than the elytra; antennæ unusually thick....VIII (*tigrinum*)
11—The two or three dorsal setigerous punctures on or adhering to the third stria....12
The dorsal punctures on the third interval, sometimes, however, as in the *vile* section of the *variegatum* group, rather close to the third stria....15
12—Intervals without punctures of any kind....13
Intervals with a single series of minute setigerous punctures....14
13—Hind body always much wider than the prothorax, the latter diversified in form but, typically, subcordate; coloration also varied.
IX (*ustulatum*)
Hind body barely at all wider than the prothorax, the general form more cylindric; elytra pale, with darker marking....X (*ephippigerum*)
14—Prothorax cordate; elytral margin not at all incurved at the humeri.
XI (*semistriatum*)
15—Frontal sulci subparallel to oblique, but never in contact at the anterior margin....16
Frontal sulci very strongly converging, in mutual contact at apex....18
16—Body oblong, greatly diversified in size, convexity, coloration and outline of the prothorax, the basal angles of which are always sharply marked....XII (*variegatum*)
Body oblong-oval, the prothorax never much narrower than the elytra, with rounded sides and obsolete basal angles, the basal margin thickly beaded as in the *quadrimaculatum* group; posterior of the two dorsal punctures submedially situated on the third interval, the anterior more or less adherent to the third stria.
XIII (*sphæroderum*)
Body ventricose, always notably small in size, the elytra much wider

than the prothorax, which is generally cordiform, with the side margins not abruptly grooved; frontal sulci oblique but never in contact at apex.....17

17—Frontal sulci never more than partially double, each elytron usually having two small distinct pale spots.....XIV (*quadrimaculatum*)

Frontal sulci evenly and closely double throughout their extent, rather strongly converging; elytra nearly as in the *assimile* group. XV (*sulcatum*)

18—Body small and more or less ventricose, nearly as in the two preceding groups, the elytra, typically, having each a small external pale spot near the apex; pronotal side margins abruptly though not coarsely grooved.....XVI (*assimile*)

The *lævigatum*, *tigrinum* and *sulcatum* groups are each represented by a single species, and the *ephippigerum* and *semistriatum* groups each by two. The largest groups are those represented by *erasum*, *ustulatum* and *variegatum*, the last named being by far the largest of the genus in America, though in the European fauna the *ustulatum* group assumes this rôle. The proper identification of *ustulatum* Linn., has caused a good deal of discussion and research, but it is known now to be typified by a species having a cordate prothorax, much narrower than the elytra, the latter with large nubilous paler humeral and subapical areas and two dorsal punctures on the third stria. No species of the *sphæroderum* group seems to have been known to Mr. Hayward, but at the time he drew up his monograph it was represented by three or four distinct Mexican forms, described by Bates in the "Biologia." In the material at hand there are a few additional species from Northern Mexico, Arizona and New Mexico. It has the aspect of a distinct genus, but is allied to the European *Philochthus*.

Group I—*litorale*

Subgenus **Odontium** Lec.

Bracteon Bedel.

This group was divided into two in the Hayward monograph, but a small section consisting of *punctatostriatum* Say, *hesperium* Fall and a new one described below, is so evidently intermediate between the *litorale* type, having two large flattened and chagrined depressions between the second and third striæ, and the *coxendix* type, having no trace of these depressions, that there can be but little doubt that they all form a single subgeneric group, as main-

tained by European systematists. The three species mentioned, instead of having the large flat depressions, have smaller and undepressed but more metallic spots in the same positions with regard to the dorsal punctures, and the more regular striation and coarser strial punctures of these species are more remindful of the *coxendix* than the *litorale* section of the subgenus, where they have been placed.

The exposition of the remarkable structural characters of the *litorale* section, recently given with clearness and general accuracy by Mr. H. C. Fall (Tr. Am. Ent. Soc., 1910, p. 94), renders it unnecessary to draw up a special table of the subgenus at the present time, and the few new forms described below can without uncertainty be interpolated in the tables of Fall and Hayward.

The two following species have a submedian lateral thoracic seta and a long truncate mentum tooth, these characters being as in *lacustre* Lec.

Bembidion opaciceps n. sp.—Body narrower and rather more convex than in *lacustre*, black, the upper surface with dark cupreo-æneous lustre; legs black, the femora pale basally; antennæ black, the basal joint pale on its under surface, more than half as long as the body, the medial joints more than three times as long as wide; head small, barely over two-thirds as wide as the prothorax, opaque, the eyes very large as usual; prothorax a third wider than long, throughout nearly as in *lacustre;* elytra nearly two-thirds longer than wide, one-half wider than the prothorax, gradually narrowed and not broadly rounded apically, the striæ fine and finely punctate, very irregular; surface shining, broadly dull laterally and at tip, with a sublateral and more convex elongate polished spot at two-thirds, between the sixth and seventh striæ. Length 4.7 mm.; width 1.8 mm. California. Levette collection.

Distinguishable from *lacustre* as stated above, and by its notably smaller head, less abbreviated prothorax and more strongly arcuate apex of the elytra, the striæ of which are more irregular, being much broken up in part. From *litorale* it differs in the elongate mentum tooth, the latter in its more elongate developments in the present group, being at the same time much more convex than in the abbreviated forms, such as *litorale*, the convexity extending through the median parts of the mentum behind it. Mr. Fall correctly states that in *litorale* the mentum tooth is short and truncate, but he defines it as having no lateral thoracic seta; in my single example, received many years ago from Desbrochers des Loges, there is a

medial lateral seta well developed; the prothorax is about a fourth wider than long; in *lacustre* it is not quite one-half wider than long.

Bembidion levettei n. sp.—Body larger and more broadly oblong-oval than in *lacustre*, black, dull bronze above; legs black, the femora pallescent basally; antennæ black throughout, nearly as in *lacustre:* head as in the latter and similarly developed, fully three-fourths as wide as the prothorax, moderately alutaceous; prothorax between a third and fourth wider than long, otherwise nearly as in *lacustre*, except that the sides are more broadly rounded and less prominently so medially; elytra parallel, somewhat over one-half longer than wide, rather more than one-half wider than the prothorax, very obtusely rounded at tip, the fine striæ finely punctate, the third and fourth similarly sinuate subbasally; chagrined parts not greenish as in *lacustre*, but of the same bronze tint as the rest of the surface, the latter dull, somewhat shining along the third interval and the fourth basally and behind the middle, the latter area extending obliquely to the seventh stria. Length (♂) 5.9 mm.; width 2.4 mm. Colorado. Levette collection.

The large size, still broader form and longer, relatively narrower prothorax, will readily serve to distinguish this species from *lacustre*, of which I have a typical representative taken by Wickham at Bayfield, Wisconsin.

There is at hand another example, labeled "Cal.," which belongs near *lacustre*, but with the elytral striæ along the median part of each elytron much contorted and broken as in *opaciceps* and with similarly opaque head, but the latter is somewhat larger than in *opaciceps* though not quite so large as in *lacustre*, and the shorter, broader elytra are very obtusely lobed at apex as in the latter; the prothorax is narrower and less transverse. I have placed this specimen with the type of *opaciceps* for the present.

The following species belongs near *hesperium* Fall, but is broader and more convex:*

Bembidion binarium n. sp.—Oblong-oval, convex, polished throughout, black, the upper surface bright æneous, the head bluish, the elytra violaceous suturally; legs piceous, the femora testaceous, black distally, the antennæ long and slender, black, with the basal joint pale beneath, the mentum tooth short and sinuato-truncate; head scarcely at all alutaceous, nearly three-fourths as wide as the prothorax, the latter two-fifths wider than long, slightly wider at base than apex, widest at the middle, with evenly rounded sides, deeply sinuate toward the very acute and everted basal angles; surface polished, convex, without trace of medio-

* The name *hesperium*—not correctly *hesperum* as written by the author, or by the present writer in the case of *Callidium hesperum*—comes very near to being preoccupied by *hesperus* Cr., a species inhabiting the Azores.

lateral seta, the median groove deep, not attaining the apex; basal foveæ elongate, deep, the angles finely but distinctly carinate; elytra one-half longer than wide and one-half wider than the prothorax, rather widest near basal third, oblong, rounded in rapidly at the sides basally, obtuse at apex, with nearly straight sides medially, polished throughout, the striæ but slightly irregular, the inner four rather finely, the outer four very coarsely punctate, becoming finely so posteriorly; third interval much the widest, the metallic green areas unimpressed, though deeply so at and behind the dorsal foveæ; suture deeply impressed behind the scutellum in the type. Length (♂) 5.0 mm.; width 2.3 mm. California. Levette collection.

The male type of this species, when compared with the same sex of *hesperium*, can be observed readily to be larger, very much stouter and more convex, more uniform in coloration, with longer, rather more distinct thoracic carinæ and broader, more convex, subbasally inflated elytra, on which the punctures of the outer striæ basally are still coarser. The two basal joints of the male anterior tarsi are similarly acutely prolonged at apex internally, but both joints are larger and more elongate in *binarium* than in *hesperium*. Of the latter I have a typical specimen from Washington State and four which I took in Humboldt Co., California; it is the most brightly colored species of the subgenus.

Punctatostriatum belongs really with the *coxendix* section of this subgenus, the long mentum-tooth being nearly similar to that of *confusum* Hayw., but each of the dorsal punctures has an attendant small unimpressed metallic-green spot, seeming at first glance to affiliate it with the *litorale* section.

The species of the *coxendix* section are rather numerous, a brief index table of those at hand being expressible as follows. I do not have *carinatum* or *bowditchi*, of LeConte, or *ænulum* Hayw., at present:

Pronotum without trace of medio-lateral seta; mentum tooth rather small, triangular and acute ..... **unicum** nov.
Pronotum with a distinct medio-lateral seta 2
2—Mentum tooth long, convex, feebly tapering, with truncate apex... 3
Mentum tooth very moderate in size, triangular 4
3—Strial punctures rounded as usual; body black, with metallic under surface, the upper bright æneous, the elytra in great part testaceous, convex, the striæ more or less metallic green; legs testaceous throughout ..... **confusum** Hayw.
A—General structure and coloration as in *confusum* but larger, more elongate and somewhat more convex, the prothorax still less ab-

breviated, being only about a fourth wider than long; elytral intervals differing in being very convex throughout, especially toward base, the similarly green punctures rather coarser. Length (♀) 6.2 mm.; width 2.5 mm. Ohio.....**æneorubrum** n. subsp.

B—General structure and coloration throughout as in *confusum* and the preceding, but shorter and relatively broader, not so convex as the preceding; head and eyes relatively still larger; prothorax but little wider than the head, two-fifths wider than long; elytra relatively much broader, not quite one-half longer than wide and fully one-half wider than the prothorax, differing also in being somewhat broadened basally; punctures and feebly convex intervals as in *confusum*. Length (♀) 6.0 mm.; width 2.6 mm. Michigan (Marquette),—Sherman.....**marquettense** n. subsp.

Strial punctures very coarse and so closely crowded as to be transverse in form; body deep black, not metallic above, greenish beneath; intervals laterally not so wide as the striæ.....**sculpturatum** Mots.

4—Elytral striæ fine, very finely punctate; body very stout and convex, obscure æneous above, black beneath, the legs in great part dark rufous.....**robusticolle** Hayw.

Elytral striæ coarse and strongly punctate; body less stout and not so convex; legs testaceous, with blackish femora.....5

5—Prothorax notably short and transverse.....**venator** nov.

Prothorax much less transverse.....6

6—Elytral striæ deeply impressed at apex.....**snowi** nov.

Elytral striæ shallow at apex.....7

7—Elytra somewhat inflated basally; side margins of the prothorax distinctly reflexed from base to apex.....**coxendix** Say

Elytra parallel; side margins of the prothorax not reflexed apically; size smaller, the outline narrower.....**vigilans** nov.

The two forms noted above under *confusum* (*nitidulum* Dej.) differ a good deal in appearance from that species, but in view of the general similarity in structure and coloration, and in the peculiar long truncate and feebly tapering or subparallel tooth of the mentum, had better appear as subspecies, for the present at least. The elytral intervals in *confusum* are nearly flat, but in the male become somewhat convex, as shown by my series from Indiana and Iowa; the great convexity of the intervals in *æneorubrum* is a striking feature and, with the longer prothorax, engages the attention at once. The relatively wider head and narrower though transverse prothorax and broad elytra, are distinctive features of *marquettense*.

Of *coxendix* I have representatives from St. Louis and from Keokuk, Iowa; its dimensions are 4.8–6.0 by 2.0–2.4 mm. The elytral intervals vary from nearly flat to moderately convex, more strongly laterad in the latter case; it is of a bright bronze above, sometimes with narrow green side margins.

Bembidion unicum n. sp.—Oblong-oval, moderately convex, narrower than *coxendix*, shining though just visibly alutaceous thoughout the entire upper surface, bright bronze, black with green lustre beneath; femora testaceous basally; antennæ long, slender, blackish, the basal joint testaceous, the next three more or less broadly testaceous basally; head large, fully four-fifths as wide as the prothorax, the latter two-fifths wider than long, with equal base and apex, the sides broadly rounded, converging and sinuate toward the rather prominent basal angles, transverse subbasal impression strong, the foveæ deep, simple, oblique, the carina fine but distinct; median stria rather fine; side margins distinctly reflexed throughout; elytra one-half longer than wide, two-fifths wider than the prothorax, the dorsal foveæ attached to the third stria, the first at the middle, the second at apical fourth; intervals nearly flat; punctures of the eighth stria very fine and feeble. Length (♀) 4.8 mm.; width 1.8 mm. Texas (Laredo).

It is interesting to note species of the *coxendix* series having no trace of the medio-lateral thoracic seta, and this is confirmatory of their affinities as expressed above; the puncture is as thoroughly obsolete as in any of the *litorale* series.

Bembidion venator n. sp.—Oblong, very moderately convex, shining, black, the upper surface bright æneous, the head and pronotum sometimes greenish or bluish, metallic greenish beneath; femora pale at tip and broadly toward base, the dark part with metallic lustre; antennæ slender, colored as in *unicum* but rather shorter than usual; head large, three-fourths as wide as the prothorax, with the usual very large eyes of the group; prothorax fully three-fifths wider than long; base and apex equally wide, the surface and general outline much as in *coxendix*, but with deeper subbasal sinuation at the sides, the basal angles very acute, everted and prominent; elytra slightly more elongate than in *coxendix*, oblong, not very obtusely rounded at apex, more than one-half longer than wide and about two-fifths wider than the prothorax, striate and punctate as in *coxendix* but more coarsely. Length (♂♀) 5.7–6.2 mm.; width 2.0–2.3 mm. Texas (El Paso),—Dunn.

This species is allied rather closely to *coxendix*, but may be distinguished by its broader, more transverse prothorax, with more prominent and acute basal angles, relatively more elongate and more coarsely sculptured elytra and several other less marked characters. The single male at hand has the elytral intervals somewhat sloping inwardly from outer to inner stria, a feature not observable in any one of the four females. The tarsal characters are of the usual type.

Bembidion snowi n. sp.—Elongate-oval, rather narrow and convex, shining, obscure bronze above, greenish-metallic beneath, the legs somewhat as in the preceding but more nearly testaceous, the antennæ long,

more than half as long as the body, the third joint three-fourths longer than the second and longer than any of the following, colored as in *coxendix*; head very large, fully four-fifths as wide as the prothorax, the latter nearly one-half wider than long; base and apex equally wide, the surface nearly as in *coxendix*, but with very feebly arcuate sides, the posterior sinuation broad, moderate, the angles more than right, although very sharply pointed as usual; elytra oblong-oval, convex, one-half longer than wide, two-fifths wider than the prothorax, rounding behind in fully apical third; striæ coarse and coarsely, closely punctate, the eighth less strongly than the seventh; punctures somewhat transverse, especially in the sublateral striæ; intervals convex, the third with the dorsal foveæ close to the third stria, at the middle and at apical fourth. Length (♂) 4.7 mm.; width 1.7 mm. Kansas. Prof. Snow.

One of the smallest, narrowest and more convex species of the subgenus, with strong elytral sculpture and more convex intervals.

Bembidion vigilans n. sp.—Smaller than *coxendix* and relatively narrower, bright bronze above, metallic green beneath, the legs and antennæ as in that species; head (♂) five-sixths as wide as the prothorax, the latter equally wide at base and apex, fully one-half wider than long, throughout nearly as in *coxendix*, except that the reflexed lateral margin almost disappears apically; elytra three-fifths longer than wide, two-fifths wider than the prothorax, parallel, the sides gradually rounding basally and at apex; striæ rather coarse but not much impressed, coarsely, not very closely punctate, the punctures of the eighth subsimilar to those of the seventh; intervals somewhat convex, the dorsal foveæ as in *coxendix*. Length (♂ ♀) 4.5–5.4 mm.; width 1.6–2.0 mm. Two examples, unlabeled in the Levette collection and probably from Indiana.

This species, while allied to *coxendix*, can be distinguished readily by the smaller average size, narrower form, parallel and not basally subinflated elytra, slightly shorter prothorax and in having the punctures of the eighth stria nearly similar to those of the seventh. In *coxendix* the punctures of the eighth stria are very much feebler.

Group II—*bifossulatum*

Subgenus **Ochthedromus** Lec.

The closest approach to this group in the European fauna is that represented by *bipunctatum* Linn., named *Testedium* by Motschulsky, and there the impressed dorsal punctures are as large and conspicuous as in *bifossulatum*. The European forms are, however, very much smaller than the American, and differ greatly in the nature of the eighth elytral stria and in the rounded humeri. The eighth stria in *bipunctatum* is deep, impunctate and near the sides,

exactly as in the *ustulatum* group, while in *bifossulatum* it is punctulate, feebly impressed, distant from the margin and subsimilar to the seventh stria; it also differs in the position of the dorsal punctures, the anterior being at about the middle, while in *bipunctatum* it is at basal third or fourth. The mentum tooth in *bifossulatum* is elongate, tapering and truncate at apex; it sometimes becomes shorter and more broadly truncate however, as in *cheyennense* and *nuperum*. We have seven rather distinctly characterized species as follows:

Mentum tooth tapering, truncate or broadly rounded at tip, where the tooth is always very much narrower than the width of the mental recess at each side of it, the sides of the mental sinus more diverging.....2

Mentum tooth rather broad, more convex, subparallel, the very wide truncate apex not narrower than the mental recess at each side, the sides of the mental sinus subparallel and arcuate.....4

2—Larger species; western regions of the continent beyond the Rocky Mountains. Oblong, moderately convex, alutaceous, black, bright bronze above, dark metallic green beneath; legs and antennæ black throughout, the latter long and slender; head four-fifths as wide as the prothorax, with very prominent eyes; prothorax fully one-half wider than long, evidently narrower at base than apex, the sides inflated, rounded, oblique and broadly, feebly sinuate basally to the basal angles, which are broadly obtuse but with sharp prominent apex; stria moderate, the basal impression broad, distinct, the foveæ large, shallow and rugose; carinæ obsolete; elytra oblong, parallel, rapidly rounding at base, obtuse at apex, fully one-half longer than wide, not quite one-half wider than the prothorax, the striæ rather fine; punctures small, a little larger laterally, those of the eighth stria fine but evident; surface more densely alutaceous toward the sides. Length (♂♀) 5.7–7.0 mm.; width 2.0–2.75 mm. Pacific coast from Los Angeles to Kamloops, British Columbia and eastward to Marysvale, Utah. Rather abundant.....**bifossulatum** Lec.

Smaller species, inhabiting the eastern parts of the continent.....3

3—Body oblong, moderately convex, shining, especially in the male as usual in this group, black, bronzed above, obscure metallic-greenish beneath; legs obscure rufous, the femora in great part blackish, with metallic lustre; antennæ black, obscure rufous at base, long and slender, the outer joints much more than twice as long as wide; head fully three-fourths as wide as the prothorax, the eyes very large and prominent; prothorax fully three-fifths wider than long, evidently narrower at base than apex, widest at the middle, the sides evenly rounded, oblique basally, becoming parallel for a very short distance before the angles, which are right; surface nearly as in the preceding, the impressions large, shallow and rugose, the carina obsolete; elytra oblong, parallel, two-fifths or more wider than the prothorax, broader in the female; striæ moderate, not

coarsely punctate, the eighth finer than the seventh and with very fine punctures; dorsal foveæ just before the middle and at apical third to fourth. Length (♂♀) 5.0–5.3 mm.; width 1.8–2.1 mm. Indiana, Iowa and Kansas. . . . . **americanum** Dej.

Body stouter, oblong, slightly convex, alutaceous, greenish-æneous above, the under surface and legs as in *americanum;* antennæ similar in coloration and length but notably more slender, the ninth joint three times as long as wide; head large, with very large prominent eyes, four-fifths as wide as the prothorax, which is fully two-thirds wider than long, with rounded sides, becoming oblique and nearly straight posteriorly, the angles obtuse, with their apices minutely sharp and prominent; surface nearly as in the preceding; elytra oblong, parallel, very obtusely rounded at tip, less than one-half longer than wide, two-fifths wider than the prothorax, the striæ fine and scarcely impressed, with moderate, distinct and well separated punctures, the eighth fine and finely punctate; foveæ not so large as in *bifossulatum*, just before the middle and at apical fourth. Length (♀) 5.6 mm.; width 2.3 mm. Iowa (Keokuk). . **illini** n. sp.

4—Oblique sides of the prothorax basally nearly straight, the angles very obtuse, with their apices sharply prominent; outer antennal joints sensibly abbreviated, the tenth barely twice as long as wide. Body almost as in *bifossulatum* in size and habitus, elongate-oblong, rather strongly convex, shining, alutaceous anteriorly and feebly laterad on the elytra; upper surface very obscure bronze, the under dark metallic green; legs obscure rufous, the femora black and metallic, pale basally; antennæ extending a little beyond the middle, not very slender, black, the basal joint rufous beneath; head large, with very prominent eyes, four-fifths as wide as the prothorax, the latter nearly as in *bifossulatum;* elytra as in that species but not quite so long and with the third and fourth intervals wider than the others, the outer striæ rather more strongly punctured and more impressed, with convex intervals; eighth very fine and feeble and feebly punctate. Length (♂) 7.0 mm.; width 2.65 mm. California (exact locality unknown). . . . . **sufflatum** n. sp.

Oblique sides becoming sinuate before the basal angles, which are right, sharp and very prominent, the sides of the base anteriorly oblique as usual. 5

5—Prothorax very short, fully three-fifths to three-fourths wider than long. Body oblong, very moderately convex, dull and alutaceous (♀), more shining (♂), bronze above, obscure metallic-greenish beneath; legs and antennæ colored as in *sufflatum*, the latter more elongate; head similar; prothorax similar but notably shorter and more transverse; elytra oblong, parallel, subcircularly rounded behind, fully one-half longer than wide, two-fifths wider than the prothorax; striæ fine and finely, closely punctate, nowhere distinctly impressed, the eighth fine but rather deep, scarcely visibly punctulate; intervals equal as usual, nearly flat; foveæ large and deep, a little before the middle and at apical fourth. Length (♂♀) 5.8–6.5 mm.; width 2.2–2.5 mm. Wyoming (Cheyenne),—Wickham. **cheyennense** n. sp.

Prothorax less abbreviated.....6

6—Form elongate, moderately convex, shining, the alutaceous areas as usual; upper surface bright bronze, dull green beneath; legs nearly black throughout; antennæ long, very slender, the outer joints about three times as long as thick; head as usual, more than four-fifths as wide as the prothorax, the latter as in *bifossulatum* but slightly less transverse and with the oblique sides more deeply sinuate before the angles, barely more than one-half wider than long; elytra throughout nearly as in *bifossulatum*, the eighth stria similarly fine, scarcely at all impressed and finely but distinctly punctate. Length (♂) 6.8 mm.; width 2.7 mm. Unlabeled in the Levette collection and probably taken in Colorado.....**regestum** n. sp.

Form broader and less elongate than in any other species, rather depressed, shining, feebly alutaceous anteriorly, bright bronze above, greenish beneath, the legs piceous-black, the coxæ pale; antennæ long and slender, the tenth joint between two and three times as long as wide, black, the basal joint very faintly rufescent beneath; prothorax as in the preceding but shorter, nearly three-fifths wider than long; elytra much shorter than in any other species, oblong, parallel, broadly rounded at apex, the latter faintly lobed in the middle as usual, two-fifths longer than wide and three-sevenths wider than the prothorax, striate and finely punctate as in the preceding, but with the eighth stria more nearly as in *cheyennense*, very fine but deep and groove-like and not perceptibly punctate under the hand lens. Length (♂) 5.5 mm.; width 2.3 mm. A single unlabeled example from the Levette collection, almost undoubtedly taken in Colorado.....**nuperum** n. sp.

The male seems to be more abundant than the female in this group. The species *regestum* and *sufflatum* so closely resemble *bifossulatum*, that they would inevitably be intermingled in most collections, and the radical differences in the mentum tooth was a very surprising discovery, showing how closely distinct species may sometimes resemble each other to superficial view.

In the type of *sufflatum* there are three very large deep equal dorsal foveæ on the left elytron, occupying the same space as the usual two foveæ, the intermediate near the second stria, and not subaxially placed on the third stria, which is the invariable rule in this group, but, on the right elytron, there is no trace of any except the two regular foveæ. The middle fovea on the left elytron would appear to be unquestionably adventitious and without special significance of any kind.

The only specimen of *bifossulatum* which I took at Duncan's Mills, Sonoma Co., is of a dull deep black throughout above, though normal beneath, and the dense opacity outside of the fourth stria

is rather abruptly defined and conspicuous. Dull black specimens also occur among those normally having metalic lustre in the *litorale* group, and I particularly note two of *lorquini* among a good series also taken at Duncan's Mills. It is difficult to understand the reason for this pronounced melanism, which has the nature of dimorphism, as there do not seem to be any intermediates.

The species allied to *honestum*, placed in this group by Mr. Hayward, will be found further on in the *ustulatum* group.

Group III—*nitidum*

Subgenus **Eudromus** Kirby

Pogonidium Gangl.

Our species described under the names *nitidum* by Kirby and *obliqulum** (*Bemb. aptum*) by LeConte, are congeneric in every way with the European *laticolle* Duft.; the above subgeneric name was proposed for *nitidum*, and so *Pogonidium* Gangl., must be regarded as a synonym. In *laticolle* the sides of the prothorax are much more sinuate at base and the elytral striæ laterad somewhat more evident, but in all other characters, including habitus, there is complete concordance; *laticolle* has a metallic-blue coloration, while our species are polished black; the strial punctures are very fine in both and the dorsal punctures are on the third interval and very small. The mentum tooth is rather short and wide and broadly sinuato-truncate at apex. The head is notably small, in marked contrast with the preceding groups. *Obliqulum* is considered a slight variety of *nitidum* by Horn and Hayward, but the two are fully distinct and in no way very closely allied. Of *nitidum* I obtained three specimens at Duluth and have a large series of *obliqulum* from various parts of California; there is no marked variability to be observed and I strongly doubt that any true intermediates exist; if so they are specifically distinct from either.

* The spelling "*obliquulum*" was employed by LeConte for this species, as well as some others, such as *Teretrius obl.*, and this spelling is generally repeated in the lists; it seems to the writer, however, that the second *u* is superfluous and that the form *obliqulum* would be better.

Group IV—*lævigatum*

Subgenus **Hydrium** Lec.

The sole representative of this group is the large polished, steel-blue species described by Say under the above name. It is peculiar among all other species of the genus known to me in two particulars. First, the form of the mentum tooth, which is short, broad and truly bidentate, the incisure between the lobes being deep and angulate. In all the other instances of a bidentate tooth which have been recorded, the apex is simply sinuato-truncate, the sides of the truncature being slightly prominent. The second special character of the group is the complete absence of the usual dorsal setigerous punctures or foveæ, two or three in number in nearly all other species of the genus; here, the absence of these tactile setæ is compensated by numerous setigerous punctures along all the intervals, widely spaced in one or two rather uneven series. The head is small, as in the *nitidum* group. LeConte had rather plausible grounds for considering *lævigatum* to be a distinct genus of the Bembidiinæ, and it is not at all certain that this view may not be correct.

Group V—*erasum*

Subgenus **Lionepha** nov.

The type species of this group, which is really rather closely allied to the *ustulatum* group, was placed with *nitidum* by Hayward, but does not belong there on account of the obtuse humeri and general habitus, but is much more closely allied to *iridescens* and a number of other species assigned to the *planatum* group by that author. The species are very numerous and rather troublesome to the systematist, because of the slight amount of structural diversity. The body is always at least moderately convex and polished in great part, with impunctate or excessively minutely punctate, striæ, which are generally obsolete externally, or, if present, very much finer there than toward the suture. The dorsal foveæ, always two in number, are partially on the third interval but closely adherent to the third stria and confluent therewith; they are generally said to be on the third stria and vary from small to notably large in size. The mentum tooth is well developed, broadly triangular and never truncate at tip so far as observed; it is diversified so slightly as to

have scarcely any value in classification. The head and eyes are moderate in size as a rule, when compared with the first two groups. The carina at the sides of the thoracic base is always long, strong and conspicuous; so this feature will seldom be alluded to in the descriptions. The species are very numerous but only very few of them have been described; those at hand may be defined as follows, they being assignable to three distinctly circumscribed sections:

Striæ of the elytra with extremely fine punctuation, the dorsal foveæ small; body black, highly polished, the legs black or piceous, the hind body never much inflated; thoracic impressions very deep and conspicuous; antennæ rather thick as a rule; species occurring in damp moss. Section LIONEPHA in sp. 2

Striæ without discernible punctuation; body oblong, the prothorax generally very short and transverse, broadly reflexed at the sides, the basal impressions large and shallow, the carinæ very long, conspicuous; hind body oblong, never so much as one-half wider than the prothorax; dorsal foveæ large, conspicuous and impressed; upper surface very moderately convex; legs, antennæ and palpi black. Section PLATAPHUS Mots.(?) 11

Striæ similarly impunctate; body more or less ventricose; prothorax very moderately transverse, subcordiform, the sides strongly sinuate basally as a rule, the basal impressions large and deep, the elytra inflated, oval, frequently pale in color or opalescent, the dorsal punctures large but less so and less impressed than in the preceding section; general habitus somewhat as in *Trechus*. Section TRECHONEPHA nov. 17

2—Striæ wholly obsolete on the disk externally, visible and moderately impressed toward the suture; upper surface notably convex; body deep black, polished, the legs black to rufous 3

Striæ visible throughout nearly the entire width, but little more impressed suturally; upper surface much more depressed, about as much so as in the *planatum* group 10

3—Sides of the prothorax broadly though evidently sinuate basally; eyes very moderate in size 4

Sides oblique, but never more than very faintly sinuate basally; size smaller 6

4—Antennæ notably slender. Body elongate-oval, convex; head three-fourths as wide as the prothorax, the sulci deep, extending behind the middle of the eyes; prothorax a third wider than long, the base slightly wider than the apex; subbasal impression evident, entire, the stria entire, moderate; basal foveæ very deep; surface punctulate at base; sides distinctly reflexed, broadly rounded, converging and broadly sinuate basally, the angles right; elytra oblong-oval, nearly one-half longer than wide, two-fifths wider than the prothorax; sutural stria rather deep, the next two feeble; anterior fovea at basal fourth, the other at three-fifths; surface with a small discal puncture very near the apex; hind tarsi slender, the first joint as long as

the next two combined. Length (♀) 4.8 mm.; width 1.9 mm. California (exact locality unknown but probably from the coast regions south of San Francisco). . . . . **osculans** n. sp.

Antennæ distinctly thick, as usual in the first section. 5

5—Prothorax less than a third wider than long, distinctly wider at base than apex. Body elongate-oval, convex, polished, black; head fully three-fourths as wide as the prothorax and as wide as an elytron, the parallel sulci deep and abrupt; prothorax nearly as in the preceding, except that the median stria does not attain the apex; elytra oblong-oval, nearly as in *osculans* but narrower, with all the striæ outside of the second obsolete or nearly so, and the subapical puncture extremely minute and feeble; anterior fovea behind basal fourth, the second at two-thirds. Male with the basal joint of the anterior tarsi very large, convex, barely longer than wide—the usual type in this section. Length (♂♀) 4.0–4.5 mm.; width 1.5–1.8 mm. California (Truckee). Oregon,—LeConte. Five specimens.

erasum Lec.

Prothorax fully two-fifths wider than long, barely observably wider at base than apex. Body much larger and broader, similarly polished and deep black; head three-fourths as wide as the prothorax, the sulci deep and abrupt, the superciliary fovea large and deep; antennæ notably thick, rather long, four-fifths as long as the elytra, black as usual, but with the first joint rufous beneath, the second joint three-fourths as long as the third, the tenth twice as long as wide; prothorax in form and surface nearly as in *osculans* but broader and more transverse; elytra nearly as in that species in form and striation but broader, also less convex internally. Length (♀) 5.3 mm.; width 2.1 mm. California (Marin Co.).

speculum n. sp.

6—Antennæ slender basally, becoming rather rapidly thick distally, the tenth joint less than twice as long as wide and fully one-half thicker than the second, the latter fully three-fourths as long as the third. Body oblong-oval, rather convex, deep black, polished, with feeble subcupreous lustre, the legs dark piceous, the antennæ black throughout and as long as the elytra; palpi black as usual; head three-fourths as wide as the prothorax, the latter rather small, but little more than a fourth wider than long, the foveæ deep, lineate at the bottom, the median stria distinct, entire; disk widest before the middle, the sides broadly rounded, oblique and nearly straight in almost basal half, distinctly reflexed; base slightly wider than the apex; elytra oblong-oval, not quite one-half longer than wide, about one-half wider than the prothorax, evenly rounded behind in fully apical third; first two striæ rather deeply, subequally impressed, the others faint, rapidly becoming obsolete externally, the foveæ before basal third and at three-fifths; subapical puncture very minute. Length (♀) 3.2 mm.; width 1.35 mm. California (Sta. Cruz Mts.).

castum n. sp.

Antennæ nearly filiform or at most very gradually thinner to the second joint. 7

7—Hind body more inflated, nearly one-half wider than the prothorax, a

little less in the male. Black, polished, the legs rufous; antennæ deep black, thick, much shorter than the elytra, the medial joints distinctly less than twice as long as wide; palpi black; head well developed, three-fourths as wide as the prothorax, the latter nearly one-half wider than long, just visibly wider at base than apex, widest before the middle, the sides moderately oblique posteriorly; stria distinct, subentire, the transverse subbasal impression subobsolete medially, with small scattered punctures, the foveæ large and deep; side margins narrowly reflexed; elytra oblong-oval, rather less than one-half longer than wide, the sutural stria deep, the others finer, diminishing outwardly; dorsal foveæ before one-third and at three-fifths. Length (♂ ♀) 3.2–3.5 mm.; width 1.25–1.4 mm. California (Arcata and Hoopa Valley, Humboldt Co.).

serenum n. sp.

Hind body less inflated, not more than about a third wider than the prothorax 8

8—Antennæ less thick than usual and more elongate, the medial joints fully twice as long as wide. Body oblong-oval, moderately convex, highly polished, black, sometimes with slight æneous lustre; legs piceous-black; antennæ black, only slightly shorter than the elytra (♂), or distinctly (♀); head moderate in size, fully two-thirds as wide as the prothorax, which is not quite one-half wider than long, nearly as in the preceding, the basal angles more than right but very sharp, not at all prominent; elytra not quite one-half longer than wide, oblong, not very obtusely rounded behind, the striæ very fine and shallow internally, obsolete externally, the sutural not deeper than the second. Length (1 ♂, 4 ♀) 3.6–3.8 mm.; width 1.35–1.55 mm. California (Truckee and Lake Tahoe). . . . **lascivum** n. sp.

Antennæ decidedly thick, the medial joints generally less than twice as long as wide 9

9—Head small, distinctly narrower than an elytron; color and lustre nearly as in the preceding throughout; body shorter, relatively broader and smaller in size; antennæ two-thirds as long as the elytra; head scarcely two-thirds as wide as the prothorax, the latter short and transverse, fully one-half wider than long, the base slightly wider than the apex, as usual in this section, its general conformation and the deep basal foveæ as in the preceding; elytra two-fifths to nearly one-half longer than wide, oblong-oval, subcircularly rounded behind, the striation as in *lascivum*, the small dorsal foveæ before basal third and at two-thirds. Length (♂ ♀) 3.0–3.4 mm.; width 1.3–1.45 mm. California (Truckee and Lake Tahoe). Thirteen examples, indicating scarcely any variability. . . . **lubricum** n. sp.

Head similarly small, the body rather convex, similar in color and in the very polished lustre throughout; head fully three-fourths as wide as the prothorax, with deep narrow sulci and moderate eyes; antennæ thick, filiform, two-thirds as long as the elytra; prothorax rather more than one-half wider than long, the base and apex equal, widest before the middle and with distinctly and evenly rounded sides, oblique and feebly sinuate basally; stria ending at the feeble anterior impression and lost in the scattered punctures of the base;

foveæ very deep, moderate in size, lineate at the bottom, close to the rather short carina as usual in this section; basal angles slightly obtuse but very sharp; elytra not quite one-half longer than wide, two-fifths wider than the prothorax, gradually rounding behind, with distinctly arcuate sides; first two striæ evident but feebly impressed, the external all obsolete, the small foveæ at apical, and before basal, third. Length (♀) 3.2–3.5 mm.; width 1.2–1.45 mm. British Columbia (Metlakatla),—Keen. Three specimens.

brumale n. sp.

Head similarly small, form more elongate, the color and lustre similar; legs deep black; antennæ black, three-fourths as long as the elytra, the medial joints two-thirds longer than wide, not quite as thick as in *vacivum;* palpi deep black; head three-fourths as wide as the prothorax, the eyes very moderate; prothorax two-fifths wider than long, in general configuration and character as in the preceding, but with the oblique sides straight; elytra fully one-half longer than wide, strongly rounded behind, parallel, with rather distinctly arcuate sides; four or five striæ visible, the outer very faint, the sutural distinctly impressed; small dorsal foveæ near basal fourth and apical third, confluent with the third stria as usual. Length (♂♀) 3.6–3.9 mm.; width 1.3–1.5 mm. Colorado (Boulder Co.). Eleven examples..... **probatum** n. sp.

Head well developed, about equal in width to an elytron. Form narrow and elongate, colored and with polished lustre as in all the preceding species, the legs piceous-black; antennæ (♂) very thick, filiform, three-fourths as long as the elytra, the medial joints barely over one-half longer than wide, deep black throughout, the palpi black as usual; head nearly four-fifths as wide as the prothorax, the eyes very moderate, the sulci sharply excavated; prothorax about two-fifths wider than long, in general conformation as in the preceding species, the carinæ only moderate in length; elytra oblong-oval, strongly rounded behind, more than one-half longer than wide, widest rather behind the middle, the sides broadly arcuate as usual; striæ distinct toward the suture, the sutural not very deep, the small foveæ rather distinct from the third stria, at basal and apical third. Length (♂) 3.65 mm.; width 1.35 mm. British Columbia (Skeena River at Terrace),—Keen..... **vacivum** n. sp.

10—Head moderate, scarcely as wide as an elytron; body oblong, deep black and highly polished; legs black, the coxæ piceous; antennæ deep black throughout, rather short, three-fourths as long as the elytra, the medial joints not quite twice as long as wide; palpi moderate, deep black; head three-fourths as wide as the prothorax, the latter about one-half wider than long, just visibly wider at base than apex, the sides very broadly rounded from apex to the slightly prominent basal angles; surface broadly convex, nearly as in the preceding species but with the large basal foveæ not quite so deep; elytra oblong-oval, barely one-half longer than wide, not quite one-half wider than the prothorax, rounding strongly behind in about two-fifths; striæ fine and feeble, not quite entire, barely traceable on the flanks, the eighth deep as usual, the minute punctures of the

striæ well separated; dorsal foveæ small, before anterior and at posterior third. Length (♂ ♀) 3.4–4.2 mm.; width 1.4–1.65 mm. California (Truckee and Lake Tahoe). Ten examples.

commotum n. sp.

Head rather larger, about as wide as an elytron; antennæ, palpi and elytra longer, the latter oblong, parallel, with nearly straight sides, rapidly rounding and very obtuse in about apical third; body broader, oblong, similarly colored and lustrous, but with the legs rufo-piceous; antennæ black, slender, longer than in *commotum*, four-fifths as long as the elytra, the medial joints more than twice as long as wide; maxillary palpi black, distinctly longer than in any other of this section; head fully three-fourths as wide as the prothorax, which is one-half wider than long, widest before the middle, the sides rather strongly rounded, oblique behind, just visibly sinuate at the hind angles, which are obtuse though not rounded; surface as in the preceding, the side margins distinctly reflexed; elytra large, rather more than one-half longer than wide, two-fifths wider than the prothorax, the striæ very fine, all unimpressed, not quite entire, the minute punctures widely separated, closer in the inner series as usual. Length (♂) 4.0 mm.; width 1.65 mm. California (Placer Co.). One specimen..... **seclusum** n. sp.

11—Sides of the prothorax distinctly sinuate basally, becoming parallel for a rather long distance before the basal angles, which are right and very sharp. Form oblong-oval, black, polished, subæneous, the elytra somewhat piceous-black; legs black, the trochanters pale; antennæ slender, the second joint almost four-fifths as long as the third, the medial joints two and one-half times as long as thick; head nearly four-fifths as wide as the prothorax, the eyes large and prominent, the sulci moderately abrupt and deep; prothorax one-half wider than long; sides moderately inflated and evenly rounded to the large basal sinus, the stria deep, not attaining the apex, the foveæ deeper than in others of this section, the surface between the lineate bottom and the carina strongly rugose; elytra one-half longer than wide, subacutely rounded in posterior two-fifths, two-fifths wider than the prothorax, oblong-oval, parallel, the striæ fine, very feebly impressed inwardly and entire, barely traceable externally, the foveæ broadly impressed, just before the middle and behind apical third, mutually as distant as the second is from the apex. Length (♀) 4.2 mm.; width 1.65 mm. British Columbia (Metlakatla),—Keen..... **blanditum** n. sp.

Sides of the prothorax more or less oblique posteriorly, but never more than broadly and feebly sinuate..... 12

12—Basal angles right or extremely nearly so, very sharp, the sides of the prothorax broadly and feebly sinuate posteriorly..... 13

Basal angles more or less evidently more than right, though always sharply defined, the thoracic sides oblique basally and nearly straight..... 14

13—Form oblong-oval, shining, black, with feeble æneous lustre, the elytra not deep black; legs black, the coxæ and trochanters paler; antennæ black, slender, not quite as long as the elytra, the medial

joints between two and three times as long as thick; palpi moderate; head well developed, fully three-fourths as wide as the prothorax, which is three-fifths wider than long, with acute though slightly blunt apical angles, widest just before the middle, the sides rather more rounded submedially; base wider than the apex and but little narrower than the greatest width; foveæ very large, rather shallow, rugose, having a lineate sulcus at the bottom, the carina long; elytra scarcely one-half longer than wide, two-fifths wider than the prothorax, oblong, with arcuate sides, obtusely rounded in apical third; striæ extremely fine, barely at all impressed inwardly, scarcely traceable externally, the large foveæ at about basal and apical third. Length (♀) 4.1 mm.; width 1.8 mm. California (Placer Co.),—Koebele..... **saturatum** n. sp.

Form oblong, less convex, polished, black, with feeble purpureo-æneous lustre; legs black, the coxæ not paler; antennæ long, rather slender, four-fifths as long as the elytra, the medial joints three times as long as wide, the tenth barely at all shorter; palpi black, distinctly longer than in the preceding; head moderate, three-fourths as wide as the prothorax, which is short and very transverse, two-thirds wider than long, with very obtuse and rather rounded apical angles, the large unimpressed scabrous area inward from the very long carina, having a lineiform deep impression at some distance from the latter; base wider than the apex, the sides but slightly inflated, subevenly rounded, feebly oblique behind; elytra oblong-oval, subcircularly rounded in fully apical third, one-half longer than wide, fully a third wider than the prothorax, parallel, with broadly arcuate sides; striæ entire, fine but deeply impressed inwardly and very distinct throughout the width, though feebler externally, the foveæ at basal and apical third. Length (♂) 5.2 mm.; width 2.0 mm. California (Placer Co.). The first anterior tarsal joint is very large, fully as long as the next three and one-half longer than wide.

laxatum n. sp.

14—Elytra broad, oblong, with nearly straight sides, rapidly and very obtusely rounding behind in barely apical third. Body and legs black, the upper surface polished and more or less metallic, the elytra dark green; head three-fourths as wide as the prothorax and fully as wide as an elytron, the antennæ black, almost as long as the elytra, the medial joints slightly more than twice as long as wide; palpi black, moderate in length; prothorax short, very transverse, not quite three-fourths wider than long, the apical angles obtuse and rounded, the basal nearly right and sharp; sides broadly, moderately arcuate, slightly oblique and just visibly sinuate basally; base slightly wider than the apex; surface at base rugose and flat laterally between the long carina and a long lineiform impression; side margins very broadly reflexed; elytra less than one-half longer than wide, about a third wider than the prothorax, the striæ throughout extremely fine, feeble and unimpressed, almost entire, barely traceable laterally, the dorsal foveæ broadly impressed, near two-fifths and three-fourths. Length (♂) 4.3 mm.; width 1.9 mm. Colorado..... **ampliatum** n. sp.

Elytra more oblong-oval, with more arcuate sides and gradually and subcircularly or parabolically rounded behind in apical two-fifths....15

15—Antennæ shorter, three-fourths as long as the elytra, with the medial joints not more than twice as long as wide. Body not broadly oblong-oval, moderately convex, black, polished, the upper surface with faint subviolaceous lustre; head relatively large, four-fifths as wide as the prothorax and fully as wide as an elytron, the sulci rather shallow, the superciliary puncture moderate; palpi black, moderate in length; prothorax short, slightly more than one-half wider than long, widest well before the middle, the sides anteriorly rather strongly rounded, strongly oblique and nearly straight in almost basal half, the angles obtuse but not rounded and feebly prominent; surface laterally at base with fine radiating regulosity, very deeply impressed at some distance from each carina, the intervening surface flat; sides broadly reflexed, the apical angles obtusely rounded; elytra one-half longer than wide, a third wider than the prothorax, somewhat parabolic behind, the striæ very fine, subentire, slightly impressed internally, obsolete externally, the large impressed foveæ near three-sevenths and two-thirds. Length (♀) 4.2 mm.; width 1.5 mm. California (Placer Co.).....**lividulum** n. sp.

Antennæ longer, the medial joints about three times as long as wide...16

16—Habitus somewhat as in the preceding, the body not very broad, oblong-oval, deep black, the polished upper surface without metallic lustre; head moderate, three-fourths as wide as the prothorax and scarcely so wide as an elytron, the sulci broad, the orbital puncture moderate; prothorax short, more than one-half wider than long, the sides broadly, evenly arcuate from the obtuse apical, to the obtuse but sharp basal, angles, straight and slightly more oblique basally; surface laterally at base finely rugose, the impression distant from the carina and only moderate in depth; median stria coarse and deep, as in the preceding, and similarly not entire; elytra nearly one-half longer than wide, two-fifths wider than the prothorax, the apex more obtusely and circularly rounded than in *lividulum*, the striation nearly similar, the large deep foveæ at three-sevenths and three-fourths. Length (♂) 4.0 mm.; width 1.6 mm. Colorado. Levette collection.....**improvisum** n. sp.

Habitus very different, larger, the body broadly oblong-oval, with much less transverse prothorax, deep black, the upper surface obscure viridi-æneous, faintly greenish beneath, the entire legs deep black; head three-fourths as wide as the prothorax, scarcely as wide as an elytron, with broad sulci and large orbital puncture; antennæ three-fourths as long as the elytra; prothorax large, evidently less than one-half wider than long, widest near apical third, but with broadly rounded sides, becoming straight basally, the apical angles but slightly blunt, the basal obtuse but sharp; base barely wider than the apex, the sides broadly reflexed; surface laterally at base broadly rugose, the impression distant from the long carina, broad and shallow; median stria not very coarse; elytra large, one-half longer than wide, two-fifths wider than the prothorax, gradually and subparabolically rounded behind, the striæ fine and feebly impressed, every-

where distinct, entire, the large foveæ near two-fifths and three-fourths, mutually as distant as the anterior is from the base. Length (♂) 5.3 mm.; width 2.0 mm. California (Placer Co.),—Koebele. **adumbratum** n. sp.

17—Striæ more impressed toward the suture; head never wider and almost always narrower than the thoracic apex; eyes very moderate in size and prominence 18

Striæ extremely fine, equal throughout the width, not more distinct suturally; head wider than the thoracic apex, the eyes larger and more prominent 39

18—Elytra feebly opalescent in lustre; prothorax never more than moderately transverse, the habitus very much as in *Trechus* 19

Elytra never opalescent; prothorax generally but not always shorter and more transverse, the hind body relatively more inflated as a rule. 27

19—Legs dark, rufo-piceous in color. Body elongate-oval, moderately convex, rather shining, black above and beneath, the elytra only very faintly picescent and with barely perceptible opalescence; head moderate, scarcely three-fourths as wide as the prothorax, the sulci rather broadly but deeply impressed; palpi and antennæ black or nearly so, the basal joint of the latter, which are very slender and about three-fourths as long as the elytra, piceous, the medial joints slightly more than three times as long as wide; prothorax a fourth wider than long, the sides broadly inflated and arcuate, becoming nearly parallel in about basal fourth; margins distinctly reflexed; base much wider than the apex; surface laterally at base finely rugose almost to the middle; at some distance from the long strong carina there is a large shallow diffuse impression; elytra about one-half longer than wide, three-sevenths wider than the prothorax, evenly oval, with the sides evenly arcuate, more so apically, widest at the middle; striæ fine, impressed inwardly, easily traceable to the sides, entire, the foveæ strong, just before the middle and near apical third. Length (♂) 4.2–4.6 mm.; width 1.7–1.9 mm. British Columbia (Inverness),—Keen . . . . . **funereum** Lec.

Legs pale yellowish-testaceous throughout 20

20—Larger species, about 5 mm. in length 21

Smaller, always distinctly less than 5 mm. in length 22

21—Form elongate-oval, moderately convex and shining, the elytra evidently opalescent, nearly black, the abdomen piceous; head rather small, three-fourths as wide as the prothorax but much narrower than an elytron, the sulci rather wide but deep, the orbital puncture somewhat distant from the eye; antennæ long and very slender, fully as long as the elytra, the medial joints between three and four times as long as wide; prothorax a fourth wider than long, widest before the middle, where the sides are well rounded, straighter apically to the obtuse and rounded angles, oblique basally, becoming sinuate only very near the angles, which are right; sides rather widely and strongly reflexed; base finely, sparsely punctulate, the foveæ very deep, at lateral fourth, the carina long and strong; elytra nearly one-half wider than the prothorax, oval, fully one-half longer than wide, the arcuate sides merging gradually into the strong apical

curvature; striæ fine, impunctate, feebly impressed inwardly, almost completely lost externally, the foveæ fine, at basal and apical third; anterior tarsi (♀) fully three-fourths as long as the tibiæ, slender, the basal joint as long as the next three. Length (♀) 5.2 mm.; width 2.0 mm. California (Los Angeles Co.). Mountains around Sta. Isabel,—LeConte..... **trechiforme** Lec.

Form somewhat as in the preceding but slightly narrower, blackish-piceous, shining, the abdomen with testaceous apex; head nearly four-fifths as wide as the prothorax, a little narrower than an elytron, the front depressed and flat between the sulci in the type, the orbital puncture very near the eye; antennæ slender, nearly as long as the elytra, the medial joints about three times as long as wide, as in the preceding fusco-testaceous, paler at base; prothorax barely a fourth wider than long, as in the preceding, except that the oblique sides behind are broadly and rather feebly sinuate to the angles, which are somewhat obtuse, the apical less broadly blunt, the sides broadly and strongly reflexed; surface nearly as in *trechiforme;* elytra similar but not so broadly oval, less than one-half wider than the prothorax, the striæ similarly fine, very feebly impressed inwardly, readily observable also laterally, everywhere with punctures, but so minute as to require high power to reveal them, the foveæ small, at basal and apical third; anterior tarsi not quite so long as in *trechiforme.* Length (♀) 4.9 mm.; width 1.8 mm. California (Redwood Creek, Humboldt Co.). A single example..... **fabrum** n. sp.

22—Basal angles of the prothorax distinctly more than right, very slightly prominent and not blunt. Body elongate-oval, piceous, the elytra paler, castaneous; abdomen pale, the rest of the under surface darker brown, shining; head rather small, three-fourths as wide as the prothorax, much narrower than an elytron, the sulci broad and shallow, the juxtocular puncture large, rounded; antennæ fuscous, paler basally, very slender, not quite as long as the elytra, the medial joints three times as long as wide; prothorax broader than in the two preceding, evidently over a fourth wider than long, the base wider than the apex as usual in this section; outline nearly as in *trechiforme,* the oblique sides behind almost straight to the angles, the apical angles blunt; surface nearly as in *trechiforme;* elytra as in the two preceding and oval, but broader, less than one-half longer than wide, the fine striæ broadly and strongly impressed inwardly, very distinct though scarcely impressed externally, having excessively minute remote punctulation, wholly invisible on cursory view, the foveæ moderate, asperate, near basal and apical third; tarsi slender. Length (♀) 4.5–4.6 mm.; width 1.6–1.7 mm. Washington State (Spokane),—Wickham..... **obliviosum** n. sp.

Basal angles right, sharp at apex, though not or but slightly prominent . 23

23—Sides of the prothorax rounded throughout to the slightly prominent basal angles. Black, with bluish lustre, the elytra piceous; under surface black, the epipleura and abdominal tip piceo-testaceous; head small, though four-fifths as wide as the prothorax, the sulci moderate; antennæ slender, fuscous, paler basally, about as long as the elytra, the medial joints about three times as long as wide; pro-

thorax small, but little wider than an elytron, a fourth wider than long, the median stria fine, not extending beyond the feeble anterior impression, the sides strongly reflexed; foveæ small, very deep, oblique, nearer the carina than the middle; elytra oval, not quite one-half longer than wide, the striæ fine, entire as usual, impressed internally, very fine externally, the seventh not visible; foveæ moderate, asperiform, near basal and apical third. Length (♂) 3.5 mm.; width 1.4 mm. California (Gilroy Hot Springs, Sta. Clara Co.).....**volatile** n. sp.

Sides of the prothorax with the posterior long oblique part broadly and feebly sinuate to the right hind angles; prothorax larger, always broader than an elytron.....24

24—Elytra deep black, not pale at tip, the opalescence barely detectable, shining; under surface black, the legs very pale. Head well developed, with rather narrow sulci, fully four-fifths as wide as the prothorax, with moderate eyes; antennæ fuscous, paler basally, four-fifths as long as the elytra, the medial joints between two and three times as long as wide; prothorax nearly a third wider than long, the sides broadly rounded, feebly and broadly sinuate basally, the angles right, sharp; base not wider than the apex; surface as in the other species of this section, feebly punctulate at base, the foveæ large, elongate, at lateral fourth, deep, the carina shorter; elytra elongate-oval, one-half longer than wide, one-half wider than the prothorax, the sides arcuate, the apex narrowly rounded; striæ fine, moderately impressed, traceable at the sides, the foveæ before basal and before apical third. Length (♂♀) 3.5–3.7 mm.; width 1.4–1.55 mm. British Columbia (Agassiz).....**impium** n. sp.

Elytra black to blackish-castaneous in color, always nubilously paler externally at tip, shining but more opalescent.....25

25—Elytra notably inflated. Oblong-oval, shining, black, the elytra piceous, pale apically; under surface blackish, the epipleura brown; head scarcely three-fourths as wide as the prothorax, much narrower than an elytron, the sulci rather deep, the juxtocular puncture large and deep; antennæ fuscous, pale at base, long and rather slender, the medial joints nearly three times as long as wide; prothorax two-fifths wider than long, the sides subprominently arcuate before the middle, oblique posteriorly, becoming subparallel for some distance before the right angles, the apical angles narrowly obtuse; surface as in the preceding species, the fine basal punctures distinct, the foveæ at lateral fourth, very deep and elongate, the carina long and distinct; elytra one-half longer than wide or very nearly, one-half wider than the prothorax, oblong-oval, the striæ entire, rather deeply impressed and very minutely and obscurely subpunctulate internally, obsolescent externally, the seventh untraceable; foveæ before basal and at about apical third. Length (♂♀) 3.7–4.5 mm.; width 1.6–1.8 mm. California (San Francisco Bay to Humboldt and Siskiyou) and Nevada (Reno). Abundant. Twenty-one examples.....**parallelocolle** Mots.

A—Similar to *parallelocolle* but shorter, with relatively still smaller head and less transverse prothorax, the latter a fourth wider than

long and less than a third as long as the elytra, which are only two-fifths longer than wide; antennæ not quite so long or slender, the medial joints less than three times as long as wide. Length (♂) 3.65 mm.; width 1.65 mm. California (Hoopa Valley, Humboldt Co.).....**amicum** n. subsp.

Elytra relatively somewhat less inflated.....26

26—Elongate-oval, black, shining, the head and pronotum with feeble greenish lustre, the elytra black, strongly opalescent; under surface black, the abdominal tip pale, the epipleura piceous-black, the legs very pale as usual in this section; head rather well developed, somewhat more than three-fourths as wide as the prothorax, the ocular puncture moderate and not at the edge of the eye; antennæ brown, paler basally, not as long as the elytra, the medial joints about three times as long as wide; prothorax a fourth wider than long, evenly rounded at the sides, which are oblique and sinuate posteriorly, the angles right, the anterior angles blunt; surface as usual, but with the large deep foveæ nearer the carina than the middle, the carina rather long, very distinct [carina angulari indistincta—LeConte]; elytra oval, fully one-half longer than wide, one-half wider than the prothorax, the striæ fine, moderately impressed and minutely subpunctulate suturally, obsolete externally, the foveæ as in the preceding. Length (♀) 3.8 mm.; width 1.4 mm. California (Sta. Cruz Mts.). San José,—LeConte.....**iridescens** Lec.

Elongate-suboval, much less ventricose than in either of the preceding, not quite black, the elytra piceous; under surface blackish-piceous; head small, less than three-fourths as wide as the prothorax, the sulci rather deep, the orbital puncture moderate, subadjacent to the eye; antennæ piceous, rufous basally, about as long as the elytra, rather thick, the medial joints between two and three times as long as wide; prothorax relatively larger than in the two preceding and distinctly transverse, two-fifths wider than long, the sides broadly and moderately arcuate, not deeply sinuate near the angles, which are right and sharp; base barely visibly wider than the apex; foveæ large, rugose, not so abrupt or deep as in the preceding, the carina moderate; elytra one-half longer than wide, barely two-fifths wider than the prothorax, the sides evenly arcuate as usual in this subsection, the striæ fine, entire, feebly impressed internally, obsolescent externally, not definitely micro-punctulate, the foveæ near two-fifths and two-thirds, closer than usual. Length (♂) 3.7 mm.; width 1.35 mm. British Columbia (Metlakatla),—Keen.

deceptor n. sp.

27—Discal striæ completely obsolete, except near the suture, where there are two or sometimes three observable.....28

Discal striæ evident throughout the width, though sometimes becoming very fine and feeble externally.....29

28—Body oblong-oval, ventricose, moderately convex, highly polished, black, the elytra dark brownish-piceous; under surface, epipleura and legs deep black throughout; head moderate, three-fourths as wide as the prothorax and narrower than an elytron, the sulci rather coarse and deep, the eyes prominent; antennæ black, not quite as

long as the elytra, the medial joints three times as long as wide; prothorax two-fifths (♂) to two-thirds (♀) wider than long, much wider at base than apex, the sides subprominently rounded before the middle, oblique and broadly, feebly sinuate behind, the angles right and sharp; surface with deep and broadly impressed abbreviated median stria and strongly reflexed lateral edges, the basal foveæ very large, rugulose, acute and deep centrally, the carina long and conspicuous; elytra oblong-oval, two-fifths longer than wide, one-half wider than the prothorax, the sides evenly and rather strongly arcuate; two striæ and a third, partially, fine and feebly impressed, are visible suturally, generally subentire; foveæ conspicuous, irregular and impressed, at two-fifths and behind two-thirds. Length (♂♀) 4.2–4.6 mm.; width 1.75–2.0 mm. California (Lake Tahoe). **testatum** n. sp.

Body oblong-oval, smaller and much less inflated, shining, rufo-piceous, the elytra clearer rufous; under surface and legs pale red-brown; head nearly four-fifths as wide as the prothorax and fully as wide as an elytron, the sulci moderate, the ocular puncture isolated; antennæ dark, piceous-black throughout, thick, three-fourths as long as the elytra, the medial joints not quite twice as long as wide; prothorax one-half wider than long, the sides broadly arcuate, oblique and broadly, feebly sinuate behind, the angles more than right but sharp; side margins rather narrowly reflexed; surface convex, the stria rather fine; foveæ at lateral fourth, rather small and deep; base punctulate, barely visibly wider than the apex; elytra convex, barely one-half longer than wide, not quite one-half wider than the prothorax, parabolically rounding behind in fully two-fifths, the sides moderately arcuate; two to three sutural striæ are feebly impressed and closely micro-punctulate, none except the sutural entire; foveæ small, at one-third and three-fifths; both anterior legs are missing in the type. Length 3.7 mm.; width 1.45 mm. British Columbia (Metlakatla),—Keen . . . . . **nescium** n. sp.

29—Legs black or blackish 30

Legs rufous throughout 35

30—Form more narrowly oblong, the prothorax very much more than half as wide as the elytra 31

Form more ventricose, the prothorax only more or less slightly over half as wide as the elytra 32

31—Black, polished, with very faint bronze lustre, the legs deep black; head nearly as in *funereum*, three-fourths as wide as the prothorax, but subequal in width to an elytron, the antennæ black and not quite as long as the elytra, the medial joints more than twice as long as wide; prothorax one-half wider than long, rather strongly rounded at the sides, which become sinuate basally and parallel for some distance before the base, the angles very sharp, somewhat prominent, rather more than right owing to the usual obliquity of the sides of the base; side margins moderately reflexed, very finely so apically, the stria deep, not attaining the apex, the foveæ large, shallow, feebly rugose, rather briefly and linearly impressed at the bottom, the carina moderately long; elytra one-half longer than wide, three-

sevenths wider than the prothorax, slightly wider behind the middle than at base, evenly rounded in apical two-fifths; striæ entire, deeply impressed, becoming very shallow, fine and feeble laterally, all minutely, remotely and irregularly punctulate; foveæ irregular, at three-sevenths and before apical third, mutually much less separated than the second from the apex. Length (♂) 3.4 mm.; width 1.4 mm. Queen Charlotte Islands (Massett),—Keen. . . . . **viator** n. sp.

Black, shining, the upper surface with strong bronze lustre throughout, the under surface and legs black; head rather well developed, four-fifths as wide as the prothorax, the sulci rather broad, alutaceous; antennæ black, very slender, the fourth joint about three times as long as wide; prothorax short, fully three-fifths wider than long, the sides anteriorly evenly rounded, becoming oblique and broadly, very feebly sinuate in basal half, the angles obtuse but sharp; surface much less convex than in *viator*, the transverse impressions very faint, the stria not entire, the sides rather widely reflexed; foveæ large, rugulose, very shallow, with a more impressed short line at base beyond lateral fourth, the carina rather long and strong; elytra oblong, subparallel, three-sevenths longer than wide, two-fifths wider than the prothorax, subcircularly rounded in fully apical third; striæ fine, moderately impressed suturally, feeble externally, the seventh scarcely observable except under a certain angle of illumination; foveæ irregular, at three-sevenths and three-fourths. Length (♂) 3.4 mm.; width 1.5 mm. British Columbia (Metlakatla), —Keen. . . . . **illex** n. sp.

32—Elytra subinflated posteriorly, wider behind the middle than at base, the foveæ lying within shallow impressions, which however do not differ in character from the general surface 33

Elytra parallel, the foveæ not lying within areas of impression; shining, the head faintly alutaceous 34

33—Body and legs deep shining black, without metallic lustre of any kind, the head alutaceous, the trochanters paler; head well developed, three-fourths as wide as the prothorax, slightly narrower than an elytron, the sulci broad, rather deeply impressed; eyes large and prominent; antennæ slender, black, three-fourths as long as the elytra, the medial joints not quite three times as long as wide; prothorax short, one-half (♂) to three-fifths (♀) wider than long, the sides strongly, evenly arcuate, converging and broadly, strongly sinuate basally, the angles right and very sharp, the apical angles obtuse but only slightly blunt; side margins broadly reflexed; stria only attaining the pronounced anterior transverse impression; foveæ deeply, linearly impressed, rugose, the carina long and strong; elytra about one-half longer than wide, one-half wider than the prothorax, parabolic in apical two-fifths; striæ subequal, strong, finer but distinct laterally, entire, the foveæ just before the middle and near apical third; second and fifth striæ deeper at apex. Length (♂ ♀) 4.2–4.8 mm.; width 1.7–2.2 mm. British Columbia (Inverness and Metlakatla),—Keen. Fourteen examples. . **haruspex** n. sp.

34—Black, with greenish lustre, the elytra obscure piceous, the under surface greenish-black; legs black, the femora gradually toward base,

and the trochanters, testaceous; head four-fifths as wide as the prothorax, though much narrower than an elytron, the sulci rather deep, moderately wide; antennæ black, slender, three-fourths as long as the elytra, the medial joints nearly three times as long as wide; prothorax one-half wider than long, the sides strongly, evenly rounded to near basal fourth, straight and parallel thence to the right and very sharp angles, the apical slightly blunt, the sides strongly reflexed; stria deep but visible only between the very faint transverse impressions; foveæ very large, shallow and rugulose, briefly linearly somewhat deeper centrally, the carina long and distinct; elytra nearly one-half longer than wide, three-fourths wider than the prothorax, strongly rounded behind in two-fifths, the sides broadly and moderately arcuate; striæ fine but impressed and distinct throughout the width, shallower laterally, the seventh obsolete, all faintly and irregularly micro-subpunctulate, the foveæ at two-fifths and three-fourths. Length (♀) 4.0–4.6 mm.; width 1.9 mm. Colorado (Boulder Co.),—Mrs. T. L. Casey. . . **turbatum** n. sp.

Black, much more faintly virescent anteriorly, the elytra much paler testaceous-brown throughout, black and non-metallic beneath, the epipleura piceous; legs blackish-piceous, the trochanters pale; head three-fourths as wide as the prothorax, very much narrower than an elytron, the sulci very wide, the intervening convexity of the front narrower and stronger; antennæ black or feebly picescent, four-fifths as long as the elytra, the medial joints fully three times as long as wide; prothorax shorter, three-fifths wider than long, only feebly rounded at the sides anteriorly, the sides moderately oblique and broadly, feebly sinuate in about basal half, becoming parallel only at the right basal angles, the apical angles obtuse and blunt; surface nearly as in *turbatum* but with rather more pronounced and more rugulose transverse impressions; elytra shorter and more obtusely rounded in about apical third, two-fifths longer than wide, three-fourths wider than the prothorax; striæ deeply impressed inwardly, very fine and feeble outwardly, the seventh obsolete; foveæ at two-fifths and rather before three-fourths. Length (♂) 4.0 mm.; width 1.65 mm. Colorado (Red Cliff),—Wickham. . . . . **conflictum** n. sp.

35—Seventh stria distinct. Body rather depressed, ventricose, shining, the head not duller, black, with metallic-greenish lustre, the elytra polished, castaneus and not metallic; under surface black; head three-fourths as wide as the prothorax, much narrower than an elytron, the sulci deep, alutaceous; antennæ slender, about as long as the elytra, the medial joints fully three times as long as wide; prothorax slightly more than one-half wider than long, the sides broadly rounded and rather widely reflexed, becoming moderately oblique and broadly, feebly sinuate in about basal half, the angles right and very sharp, the apical blunt; surface with the stria deep, ending at the obsolescent impressions, the foveæ very large, shallow and rugose, briefly and linearly somewhat deeper centrally, the carina strong in basal fourth; elytra oblong, parallel, with broadly arcuate sides and rather obtusely rounded apex, two-fifths longer than wide and three-fifths wider than the prothorax, the striæ very distinct, smooth

throughout and entire, deeply impressed internally, less so externally, the foveæ rather irregular, at two-fifths and four-fifths. Length (♂) 3.9 mm.; width 1.7 mm. New York (Catskill Mts.),—H. H. Smith. A single example.....**rusticum** n. sp.

Seventh stria obsolete or barely traceable.....36

36—Head well developed, but little narrower than an elytron. Body moderately convex or ventricose, shining, with barely alutaceous head, black, with feeble green lustre anteriorly, the elytra and epipleura castaneous; under surface black; head four-fifths as wide as the prothorax, the sulci rather shallow, the ocular puncture moderate; antennæ long, slender, piceous-brown throughout, nearly four-fifths as long as the elytra, the medial joints fully three times as long as wide; prothorax only two-fifths wider than long, the evenly arcuate and well reflexed sides becoming straight and parallel in basal fifth, the angles right and very sharp, the apical obtuse and blunt; stria moderate, not quite entire; foveæ large, rugose, rather shallow, linearly deep at the bottom, the carina long and strong; elytra just visibly inflated posteriorly, gradually strongly narrowed in more than apical third, about one-half longer than wide and two-thirds wider than the prothorax; striæ fine, moderately impressed, gradually feeble externally; foveæ rather irregular, just before the middle and near apical third. Length (♀) 5.0–5.5 mm.; width 2.1–2.2 mm. California (Truckee). Three specimens. **adultum** n. sp.

Head distincly less developed, always very much narrower than an elytron.....37

37—Prothorax short and transverse. Body small, oblong-oval, moderately shining, black and without metallic lustre anteriorly, the elytra red-brown; under surface black, the epipleura pale brown; head two-thirds as wide as the prothorax, with rather deep sulci; antennæ not quite as long as the elytra, fuscous, gradually paler basally, the medial joints only about twice as long as wide; prothorax fully three-fifths wider than long, widest and laterally rather more rounded about the middle, the sides thence somewhat abruptly oblique and broadly, strongly sinuate to the right and moderately sharp angles, the anterior angles obtuse but rather sharp; surface with a fine stria between the feeble transverse impressions, moderately reflexed at the sides, the foveæ large, shallow and rugose, broadly, sublinearly deeper at lateral fourth, the carina distinct; elytra feebly inflated posteriorly, broadly parabolic in nearly apical two-fifths, two-fifths longer than wide and about one-half wider than the prothorax, the fine striæ moderately impressed, feeble externally, the foveæ irregular, just before the middle and behind apical third. Length (♀) 3.5 mm.; width 1.5 mm. California (Truckee).....**dilutum** n. sp.

Prothorax much less abbreviated; size larger.....38

38—Body oblong-suboval, only feebly ventricose, moderately convex and shining, black, the elytra blackish-castaneous; head three-fourths as wide as the prothorax, the sulci deep, the orbital puncture adjoining the eye; antennæ elongate, moderately slender, as long as the elytra, rufo-piceous, blackish distally, the medial joints three

times as long as wide; prothorax a third (♂) to two-fifths (♀) wider than long, strongly and evenly rounded at the sides, the latter oblique and gradually more sinuate in about basal half, the angles right and sharp; stria fine between the feeble transverse impressions; margins well reflexed; foveæ large, rugulose and shallow, briefly sublineate at the bottom, the carina long and strong; elytra somewhat inflated posteriorly, one-half longer than wide, one-half wider than the prothorax, the striæ fine, moderately impressed, gradually feeble laterally, the seventh easily glimpsible at certain angles of reflection; foveæ irregular, at three-sevenths and three-fourths. Length (♂♀) 4.2–4.5 mm.; width 1.6–1.8 mm. British Columbia (Stikine River Cañon),—Wickham. Six examples. **bucolicum** n. sp.

Body strongly ventricose, shining, black, with feeble greenish lustre anteriorly, the elytra bright and pale testaceous-brown; under surface black, the epipleura brown; head three-fourths to nearly four-fifths (♂) as wide as the prothorax, with broad but deep sulci; antennæ slender, fuscous, the basal joint rufous, nearly as long as the elytra, the medial joints somewhat more than three times as long as wide; prothorax a fourth to third wider than long, the base and apex subequal, the sides widely reflexed, broadly, evenly arcuate, becoming rapidly sinuate and parallel near the base, the angles right and sharp, the apical angles obtuse and rather blunt; surface with the stria subentire, the foveæ large, shallow and rugose, deeply and briefly sublinear medially at base, the carina long and strong; elytra one-half longer than wide to somewhat less, the posterior inflation barely at all evident, the sides broadly arcuate, broadly parabolic in about apical third, two-thirds to three-fourths wider than the prothorax; striæ fine, barely at all impressed though distinct and subequal but feebler laterally, entire as usual in this group; foveæ moderate, near three-sevenths and three-fourths. Length (♂♀) 4.0–4.8 mm.; width 1.65–1.85 mm. Colorado. Levette collection. Fourteen examples, displaying but little variability.

gratiosum n. sp.

39—Body elongate-suboval, moderately convex, the type pale yellowish-testaceous throughout, with the legs straw-yellow, shining, the head faintly alutaceous, the sulci rather shallow; antennæ very slender and elongate, about as long as the elytra, slightly fuscous, paler basally, the first joint palest; medial joints fully three times as long as wide; prothorax a third wider than the head, two-fifths wider than long, broadly reflexed at the sides, which are strongly, subevenly rounded, becoming oblique but only just visibly sinuate in about basal half, the angles right and sharp; surface with the fine stria extending from the apical margin to the pronounced transverse subbasal impression, the base somewhat depressed and punctulate; near basal fifth there is a short oblique obtuse elevation, extending to the marginal gutter; foveæ large, moderately deep, smooth, subbistriate; the usual carina is wanting and replaced by the oblique elevation; elytra oval, with evenly arcuate sides, rather more than one-half longer than wide and one-half wider than the prothorax; striæ very fine, entire though extremely feeble, having

remote and infinitesimal punctures, visible only under high magnification; foveæ small, near two-fifths and three-fourths. Length (♀) 4.8 mm.; width 1.9 mm. California (Booneville, Mendocino Co.).....**repens** n. sp.

The species identified above as *erasum* Lec., from Lake Tahoe specimens, agrees with the original description perfectly in all respects except one, but this is very difficult to understand if the material alluded to really represents the species of LeConte, for that author states that the third stria is "profunde bipunctata." The first section of the subgenus, or *Lionepha* proper, has the dorsal foveæ notably small and feeble throughout. The second section may be identical with the European *Plataphus* of Motschulsky, and if so will have to be removed to form a separate subgenus; the species in this section described under the name *ampliatum* is probably that identified as the Alaskan *incertum* Mot., by Hayward, but the description of *incertum* given by its author (Bull. Mosc., 1845, p. 350), shows that it is a rather smaller species, 3.3 by 1.5 mm., obscurely æneous above and, although most of the structural characters given might be considered applicable to *ampliatum*, the radical difference in habitat—Sitka, an island of the Pacific, and the high mountain regions of Colorado—should cause one to hesitate in definitely stating the two to be specifically identical. The multiplicity of allied though obviously distinct forms in the Pacific regions, such as *blanditum*, *saturatum*, *lividulum* and *improvisum*, is another cause of uncertainty in such an identification.

The third section, or that typified by *trechiforme* and *iridescens* of LeConte, is so distinct in habitus that it may be regarded as more properly forming a separate subgenus, as indeed recommended by Hayward, although I regard the dorsal foveæ of the elytra as attached to the third stria, and not entirely free as in *Notaphus*, and it therefore should form a part of the *Peryphus* series. Some of the species, and especially such as *haruspex*, *conflictum* and *rusticum*, and even *funereum* Lec., were regarded as a part of the *planatum* group by Hayward, but I think find a more fitting place near the *trechiforme* subsection of what is called *Trechonepha* above. *Rusticum* may be allied to *simplex* Hayw., but the terms slender and elongate, with the prothorax narrower at base than apex and having the basal foveæ deep, could not be applied at all well to *rusticum*,

where the thoracic base is somewhat wider than the apex, with notably large and shallow foveæ and the elytra are broadly inflated. *Haruspex* may be the Vancouver form mistaken for *quadrifoveolatum* Mann., of the Island of Sitka; the latter is however a very much smaller and narrower species, 3.3 by 1.3 mm. in dimensions; the upper surface in *haruspex* has no trace of a blue-black coloration, as described in *nigrocœruleum* Hayw.

The species named *iridescens* by LeConte, seems to be represented correctly by the specimen described above, taken by Harford or Koebele in Sta. Cruz Co.; it at least agrees very well with the original diagnosis (Ann. Lyc. N. Y., 1852, p. 191), except in the statement quoted in the above description, and this lack of distinctness in the carina may be due to an accidental defect in the unique type. I have identified the more abundant form, with less black and more inflated elytra, as *parallelocolle* Mots., as it agrees well with the description of that species if we assume the immaturity of Motschulsky's type.

The species described above under the name *repens* is a very remarkable and isolated type of the subgenus, only in general features allied to the *trechiforme* section, though more evidently to that than any other. It is particularly notable in the larger head, which is very deeply retracted—virtually to the eyes—and in the excessively fine and almost completely unimpressed elytral striæ throughout the width, even the seventh being visible. The description of *vandykei* Blaisd., from Mendocino Co., seems to correspond in some degree with the type of *repens*, but indicates a larger species, having the prothorax equally wide at base and apex, and in length equal to the basal width, and not having the base wider than the apex and much exceeding the medial length, as is the case in *repens;* it differs especially, however, in the sides of the prothorax, which in *vandykei* are said to be sinuate at base, becoming parallel before the hind angles, which are right; in *repens* the sides are oblique and very nearly straight basally, the hind angles obtuse though very sharp; *repens* differs also in having the fifth elytral stria briefly and feebly deepened at apex, not "strongly grooved" at tip. The type specimen is surely immature, and the species is probably piceous in color, with very pale legs, in its normal coloration.

Group VI—*planatum*

Subgenus **Melomalus** nov.

This group is composed of a moderate number of species, occurring only in the western parts of the continent, and agreeing very well in certain features of habitus. The body is oblong, notably depressed on the upper surface, with the elytral striæ entire, subequally strong throughout the width as a rule, the seventh always evident and frequently almost as deep as the sixth. The color is usually deep black, without evident metallic lustre, and the elytra are never variegated or maculate. The mentum tooth is generally well developed, triangular, with broadly rounded and obtuse tip but, in the singular *extensum* type, is extremely short and broad, with the apex obtuse. The two dorsal foveæ of each elytron adhere to the inner side of the third stria as a rule, rarely becoming detached, and vary from moderate in size to large and impressed, as in the second section of the preceding subgenus. The species *planiusculum* and *complanulum* of Mannerheim, of Sitka and Kadjak, Alaska, respectively, belong to this group, but I must hold the latter to be different from anything before me at present; the former is said to have a greenish margin of the subquadrate pronotum and large deep elytral foveæ; its dimensions are said to be 4 by 1.5 mm. The latter is nigro-æneous in lustre, the prothorax twice as wide as long and the elytral foveæ small; it is 3.3 by 1.3 mm. in size and is probably different from any of the numerous allied California forms.

The species at hand form three very distinctly limited sections as follows:

Neck short; body large; elytra broad, alutaceous, the prothorax but slightly transverse; striæ barely impressed, the inner with very fine irregular and close-set punctulation; foveæ rather large; legs and tarsi very long and slender. Section MELOMALUS in sp.....2

Neck short; body small, narrower, the elytra polished; prothorax decidedly transverse; striæ deeply impressed as a rule, impunctate; foveæ small or large; tarsi moderate. Section MICROMELOMALUS nov...4

Neck long; body very elongate, more or less depressed, the elytra polished; prothorax subcordiform, barely wider than long; striæ impunctate, the foveæ moderate; tarsi rather long, very slender. Section TRACHELONEPHA nov.....10

2—Prothorax sinuate at the sides basally, the sides becoming parallel in basal fifth or sixth. Body broadly oblong, depressed, black, pol-

ished, greenish-black anteriorly, the elytra less shining and faintly greenish; under surface and legs black; head five-sixths as wide as the prothorax, the sulci broad, not very deep; antennæ long and very slender, black, three-fourths as long as the elytra, the medial joints about four times as long as wide; prothorax a third wider than long, the sides broadly, evenly arcuate, rather abruptly sinuate basally, moderately broadly, strongly reflexed; surface with crease-like lines and strong subapical but obsolete subbasal impression, the stria between the two moderate; basal foveæ large, shallow, rugose, deeply linearly and obliquely impressed beyond lateral fourth, the carina long but only moderately strong; elytra large, three-fifths longer than wide, three-fourths wider than the prothorax, gradually parabolic in fully apical third, the striæ fine, feebly impressed, the outer ones distinct, though still feebler, the intervals just visibly convex; foveæ at three-sevenths and four-fifths, deep; apical part of the fifth stria a long and conspicuous groove. Length (♀) 7.0 mm.; width 2.7 mm. California (near San Francisco),—Dunn...**solutum** n. sp.

Prothorax moderately oblique and broadly, very feebly sinuate at the sides in about basal half, the angles sharp as in the preceding, though evidently more than right.....3

3—Pronotum broadly and strongly reflexed at the sides, the body broadly oblong, black, the anterior parts polished and with feeble viridiæneous lustre, the elytra dull bronzy-black, the under surface and legs black; head five-sixths as wide as the prothorax, it and the antennæ nearly as in *solutum*, the medial joints, however, rather less than four times as long as wide; prothorax barely a fourth wider than long, the surface throughout nearly as in the preceding, except that the transverse basal impression is rather deep and distinct; elytra not quite three-fifths longer than wide and four-fifths wider than the prothorax, flat above, the striæ fine and scarcely at all impressed, the seventh about as distinct as the sixth; foveæ very moderate, at three-sevenths and four-fifths. Length (♀) 7.7 mm.; width 2.8 mm. British Columbia. Lake Superior,—LeConte.
planatum Lec.

Pronotum much more narrowly but strongly reflexed at the sides; upper surface shining and blackish-green throughout, the elytra slightly less shining; under surface and legs black; head four-fifths as wide as the prothorax, nearly as in the two preceding, the very slender antennæ with the medial joints four times as long as wide; prothorax slightly more than a fourth wider than long; surface throughout nearly as in *solutum*, the transverse subbasal impression feeble, obsolete at the middle; elytra one-half longer than wide and three-fourths wider than the prothorax, ogival in nearly apical two-fifths; striæ fine, slightly impressed and with feebly convex intervals, the seventh stria feeble, sometimes only just observable in the male; strial punctulation stronger and more distinct than in either of the two preceding; foveæ rather strong, at three-sevenths and four-fifths, the very deep apical groove of the fifth stria as in the two preceding. Length (1 ♀, 7 ♂) 6.2–7.0 mm.; width 2.3–2.5 mm. Cal-

ifornia (north of San Francisco). The description is drawn from the female. . . . . **adjutor** n. sp.

4—Elytra notably short, only about a third longer than wide. Black, polished throughout, without trace of metallic lustre, the legs pale brown, the femora piceous, paler basally; head small, though three-fourths as wide as the prothorax, the sulci deep and alutaceous; antennæ blackish, the basal joint and apex of the second and third pale, subequal in length to the elytra, the medial joints between two and three times as long as wide; prothorax one-half wider than long, the sides inflated and evenly rounded nearly to the base, where they become oblique and broadly, feebly sinuate, the angles rather obtuse but not rounded; surface moderately convex, the transverse impressions evident, the stria entire; foveæ large and shallow, rugulose, the carina moderate; elytra two-thirds wider than the prothorax, oblong, parallel, with broadly arcuate sides and very obtusely rounded apex in less than posterior third; striæ strongly impressed, especially internally, everywhere very conspicuous; foveæ well developed, at two-fifths and four-fifths. Length (♂) 3.0 mm.; width 1.25 mm. California (Hoopa Valley, Humboldt Co.)
curtulatum n. sp.

Elytra always distinctly more than a third longer than wide. 5

5—Dorsal foveæ of the elytra large and deeply impressed. Body oblong-suboval, very moderately convex, shining, black, with feeble æneous lustre above, black beneath, the legs black; head well developed, four-fifths as wide as the prothorax, the sulci broad; antennæ black, rather slender, three-fourths as long as the elytra, the medial joints evidently more than twice as long as wide; prothorax two-fifths to one-half wider than long, the sides strongly rounded, oblique and sinuate basally, the angles right or rather more, sharp; sides somewhat widely but not strongly reflexed; transverse impressions very feeble, the stria limited by them; foveæ large, rugose, shallow, linearly deeper at their middle at base, the carina moderate; elytra one-half longer than wide, three-fifths wider than the prothorax, rounded in apical third, the feebly arcuate sides subparallel; margin incurved at base to the fourth stria, the striæ fine but deeply impressed—at least suturally, the foveæ unusually approximate, barely before the middle and at apical fourth. Length (6 ♂, 4 ♀) 3.3–3.7 mm.; width 1.3–1.45 mm. British Columbia (Metlakatla and Inverness), —Keen. . . . . **planiusculum** Mann.

Dorsal foveæ small, or at least not widely impressed as in *planiusculum*. . 6

6—Body more elongate, the prothorax only a fourth wider than long. Depressed and shining, black, without metallic lustre, the legs piceous; head fully four-fifths as wide as the prothorax, the sulci broad, alutaceous, not very deep; antennæ long, piceous-black, four-fifths as long as the elytra, the medial joints nearly four times as long as wide; prothorax evenly and distinctly rounded at the sides, the latter converging and broadly, distinctly sinuate posteriorly, the angles right or slightly more and sharp; stria deep and subentire, the transverse impressions subobsolete, the margins strongly reflexed; foveæ large, shallow, rugulose, deep medially at base, the carina long, dis-

tinct; elytra three-fourths longer than wide, slightly inflated behind the middle, obtusely ogival in apical third, not quite one-half wider than the prothorax; striæ deeply impressed, with convex intervals; foveæ at three-sevenths and four-fifths; legs longer and more slender than in the preceding. Length (1 ♂, 3 ♀) 4.2–4.5 mm.; width 1.5–1.6 mm. California (coast regions just north of San Francisco). **vespertinum** n. sp.

Body shorter, the prothorax much more abbreviated 7

7—Elytral striæ not at all impressed, fine, deep and groove-like throughout, though still finer at the sides, virtually impunctate; intervals perfectly flat. Body depressed, black, not metallic, the legs piceous-black; head three-fourths as wide as the prothorax, the sulci moderately deep, alutaceous as usual; antennæ slender, piceous-black, with paler basal joint, four-fifths as long as the elytra, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long, the broadly rounded sides becoming oblique and broadly, just visibly sinuate behind, the angles slightly more than right; stria deep but only between the very feeble transverse impressions; foveæ large, rather shallow, rugose, only indefinitely deeper medio-basally, the carina rather long and strong; elytra very feebly inflated posteriorly, with feebly arcuate sides, circularly rounded in posterior third, one-half longer than wide, less than one-half wider than the prothorax; foveæ at three-sevenths and near three-fourths. Length (♀) 3.5 mm.; width 1.28 mm. California (Soda Springs, Anderson Valley, in or near Mendocino Co.). **effetum** n. sp.

Elytral striæ deeply impressed, with convex intervals as in all the others of this section 8

8—Head well developed, almost as wide as the prothorax. Black, shining, with feeble greenish lustre on the head and pronotum, the legs blackish-piceous; head with prominent eyes, the rather deep sulci feebly alutaceous; antennæ slender, black, about three-fourths as long as the elytra, the medial joints three times as long as wide; prothorax two-fifths wider than long, with the base and apex equal, the sides strongly and evenly arcuate, becoming distinctly sinuate posteriorly and nearly parallel before the angles, which are right and sharp, the apical angles not very blunt; surface slightly convex, the impressions very feeble, the stria fine; margins rather broadly and strongly reflexed; foveæ large, shallow, rugulose, deeper centrally at base, the carina moderate but distinct; elytra oblong, with parallel, broadly arcuate sides, obtusely and subcircularly rounded in nearly apical third, somewhat less than one-half longer than wide, four-fifths wider than the prothorax; striæ rather deeply, subequally impressed throughout the width and entire as usual; deeper apical part of the fifth short and very oblique; intervals broadly convex, the foveæ at three-sevenths and four-fifths. Length (♂♀) 3.8–4.2 mm.; width 1.5–1.7 mm. California (Duncan's Mills, Sonoma Co.). Ten examples . . . . . **oppressum** n. sp.

Head smaller, distinctly narrower than the prothorax 9

9—Form oblong, depressed, deep black throughout and lustrous, the

legs piceo-rufous; head three-fourths as wide as the prothorax, with rather deep sulci and strongly convex front between the latter; antennæ piceous-black, the basal joint slightly paler, slender, nearly four-fifths as long as the elytra, the medial joints not quite three times as long as wide; prothorax nearly one-half wider than long, the sides strongly reflexed, rounded, generally somewhat more prominently so near the middle, oblique and broadly, very feebly sinuate basally, the angles obtuse but rather sharp; surface nearly as in the preceding, except that the foveæ are rather less strongly rugose; elytra one-half longer than wide to a little less, only two-fifths wider than the prothorax, parallel, circularly rounded in apical third, the sides subparallel and feebly arcuate; striæ fine, moderately impressed and with feebly convex intervals throughout, the deep apical part of the fifth longer and less oblique than in *oppressum*, the foveæ at three-sevenths and three-fourths. Length (♂ ♀) 3.2–3.5 mm.; width 1.2–1.35 mm. California (Sonoma and Sta. Clara Cos.). Eight examples..... **flebile** n. sp.

Form more narrowly oblong, still smaller in size, similar in coloration of the body, legs and antennæ; head nearly four-fifths as wide as the prothorax; antennæ slender, almost three-fourths as long as the elytra, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long, the broadly, rather strongly arcuate sides slightly oblique and broadly and not strongly, though distinctly, sinuate behind, the angles obtuse but sharp; surface nearly as in the preceding; elytra also nearly as in *flebile*, but narrower, though one-half wider than the prothorax, the latter being relatively somewhat narrower than in *flebile*. Length (♂ ♀) 2.9–3.2 mm.; width 1.1–1.2 mm. California (Gualala and Anderson Valley, Mendocino Co.). Three specimens..... **timefactum** n. sp.

Form and coloration nearly as in the two preceding, but with more nearly deep black legs and antennæ and more transverse prothorax; head three-fourths as wide as the prothorax, with deep and rather narrow sulci; antennæ subequal in length to the elytra, not very slender; the medial joints between two and three times as long as wide, the basal joint piceous; prothorax short, fully one-half wider than long, the sides strongly, evenly rounded, oblique and distinctly sinuate behind, the angles right and sharp; surface nearly as in the preceding, except that the transverse impressions are more distinct, the foveæ very large but barely concave, rugose, with a long linear impressed medio-basal part, the carina moderate; elytra oblong, with parallel and broadly arcuate sides, two-fifths longer than wide, circularly rounded in about apical third, one-half wider than the prothorax, the striæ well impressed and with moderately convex intervals throughout, the fifth as in the preceding two species; foveæ near two-fifths and four-fifths. Length (♂ ♀) 2.75–3.3 mm.; width 1.15–1.4 mm. Colorado. Levette collection. Fifteen specimens. **decrepitum** n. sp.

10—Form elongate-suboval, only moderately depressed, polished black throughout, the anterior parts slightly greenish; legs piceo-rufous; head not distinctly narrower than the prothorax, with unusually

long neck and moderate, very prominent eyes, the sulci rather broad and shallow; antennæ piceous, the basal joint rufous, very long and slender, fully as long as the elytra, the medial joints between three and four times as long as wide; prothorax barely visibly wider than long, much narrower at base than apex; base distinctly shorter than the length; sides broadly arcuate, becoming rapidly sinuate behind and parallel in basal fourth, the angles right and sharp, the apex feebly sinuate, with blunt angles; surface smooth, the stria fine, extending from base to the distinct and sharp subapical impression, the basal impression wholly obsolete medially; foveæ large, obliquely elongate and deep, beyond lateral fourth, only feebly rugulose, the carina rather long and distinct; margins strongly but not very broadly reflexed; elytra two-thirds longer than wide and almost twice as wide as the prothorax, feebly subinflated posteriorly and evenly rounded behind in about two-fifths; sides feebly arcuate, the rounded humeri widely exposed at base; striæ entire, fine, feebly impressed, becoming subobsolete externally, the seventh obsolete; foveæ rather strong, at three-sevenths and near four-fifths; tarsi very long and slender. Length (♀) 5.3 mm.; width 2.0 mm. California (Hydesville, Eel River Valley, Humboldt Co.). One example. . . . **electum** n. sp.

Form narrow, elongate, strongly depressed above, shining, piceous-black, the elytra and epipleura rather pale castaneous; under surface black, the legs long and very slender, pale piceous, the base and tip of the femora testaceous; head but just visibly narrower than the prothorax, with moderate though prominent eyes, the sulci deep, shining; antennæ long and very slender, piceous-black, the basal joint paler, fully as long as the elytra, the medial joints fully four times as long as wide; prothorax less than a fifth wider than long; base distinctly narrower than the apex, the sides evenly, strongly rounded, rapidly converging behind the middle and sinuate, becoming parallel in more than basal fourth, the angles slightly obtuse because of the lateral obliquity of the base, but not blunt; apex broadly sinuate, with slightly blunt angles; surface with strong anterior impression, the posterior obsolete, the stria deep and strong, biabbreviated; margins moderately reflexed; foveæ moderate, only slightly rugulose, very deep, sublinear, far outside of lateral fourth and unusually near the slender feeble carina; elytra about twice as long as wide, not quite one-half wider than the prothorax, gradually parabolic in about apical third, subparallel, with very feebly arcuate sides, the margin incurved at base to the fifth stria, which becomes very deep in apical sixth; striæ smooth, deeply impressed internally, becoming feeble externally, the seventh very faint; intervals convex suturally; foveæ just before the middle and behind apical fifth. Length (♀) 5.3 mm.; width 1.8 mm. California (Soda Springs, Anderson Valley, Mendocino Co.). . . . . **extensum** n. sp.

My identification of *planatum* Lec., rests upon the authority of Mr. Hayward, who made actual comparisons of the Lake Superior and British Columbia representatives; the forms inhabiting the

middle coast regions of California are specifically different, as can be seen at once by the ample series of *adjutor* at hand. The *planiusculum* series presents a very different habitus from the *planatum* section, because of the very much smaller size, impunctate striæ and polished elytra. More material than the unique type of *effetum* would be highly desirable, in order to judge of the permanence of the very remarkable elytral striation, in which it differs radically from any other species of the second section. Otherwise it very closely resembles *flebile*, excepting that the antennæ are perceptibly longer and the prothorax more evenly rounded on the sides anteriorly.

The two species forming the third section are among the more isolated of the entire genus, because of their relatively slender and subequally wide anterior parts, long neck and long and very slender antennæ and legs. The species described by Dr. Blaisdell, from Mendocino Co., under the name *falsum* (Pr. Acad. Nat. Sci., Phila., 1902, p. 76), undoubtedly belongs to this section, but differs from *electum* in its broader prothorax when compared with the elytra, this proportion being nearly as in *extensum*, but it differs from *extensum* in its shorter elytra, these being two-thirds longer than wide as in *electum*. The author, however, makes no allusion to a notably long neck in *falsum*.

Group VII—*bifasciatum*

Subgenus **Liocosmius** nov.

In this very limited group the species are small, elongate, moderately convex and highly polished throughout, having a subcordiform to obtrapezoidal prothorax and very smooth elytra, with striation only visible toward the suture and sometimes wholly obsolete, except the sutural stria toward the apex. The striæ are generally wholly impunctate, but in one rather aberrant species are very finely punctured as in the *erasum* section. The elytra always have each two clearly defined pale spots, which assume various forms in the different species.

The five species in my collection may be known as follows:

Prothorax obtrapezoidal; elytra each with three subsutural striæ, which are finely but distinctly punctured. Body black, polished, each elytron broadly testaceous laterally in basal third, the pale area

extending inwardly along the base to the scutellum, and also with a transverse pale fascia near apical third; epipleura and legs pale flavate, the under surface black; head three-fourths as wide as the prothorax, with well developed eyes, the shining sulci deep; antennæ slender, piceous, with paler basal joint, about as long as the elytra, the medial joints between two and three times as long as wide; prothorax transverse, nearly one-half wider than long, the sides rounded, feebly oblique behind, becoming slightly sinuate at the right hind angles; margins moderately reflexed; surface convex, punctate at base, with very feeble impressions and fine stria; foveæ rounded, very deep, the carina distinct; elytra oblong, parabolic in apical two-fifths, one-half longer than wide and two-fifths wider than the prothorax, having two distinct punctate striæ and a third—shorter and very feeble, the second not quite entire, the fifth feeble and oblique; foveæ near basal and apical third. Length (♂) 3.35 mm.; width 1.25 mm. California (Gilroy Hot Springs, Sta. Clara Co.).

delectum n. sp.

Prothorax more nearly cordiform, the sides more sinuate basally, the elytral striæ in great part obsolete and, where visible, impunctate. . 2

2—Prothorax about as long as wide and barely visibly wider than the head. Body elongate, highly polished and smooth, piceo-rufous in color, each elytron with a large triangular humeral pale spot, extending on the margin to basal third and, inwardly, enveloping the scutellum, the humeral callus piceous, also with a pale fascia behind apical third, which is gradually attenuated and bent backward toward the suture; under surface pale piceous, the epipleura and legs flavate; head with prominent eyes and moderate sulci; antennæ long, flavate, fully as long as the elytra, the medial joints fully three times as long as wide; prothorax convex, rounded at the sides anteriorly, the sides moderately oblique from before the middle, becoming sinuate, parallel in basal sixth, the angles right and sharp; impressions obsolete; stria very fine and greatly biabbreviated; margins extremely finely reflexed; foveæ large, smooth, moderately deep, with a fine linear impression, the carina rather long and strong; elytra ogival in apical third, fully one-half longer than wide and four-fifths wider than the prothorax; sutural stria alone evident and this only behind, the eighth deeply impressed as usual; foveæ very small, at two and five sevenths. Length (♂) 3.6 mm.; width 1.2 mm. California (Cloverdale, Sonoma Co.) . . . . . **hilare** n. sp.

Prothorax wider than long and distinctly wider than the head 3

3—Prothorax at base about as wide as at apex. Form narrowly oblong, convex, polished, deep black, with feeble greenish or æneous lustre, each elytron with a large, transversely rounded external pale spot behind the humeri and a transverse fascia at apical third, extending to inner third; under surface black, the legs rufo-piceous; head four-fifths as wide as the prothorax, the antennæ black, piceous at base, almost as long as the elytra, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long, the sides rounded from apex to basal fourth, becoming parallel in basal fifth, the angles very sharp; surface convex, the margins moderately re-

flexed, the impressions subobsolete, the stria moderately impressed, not entire; foveæ narrow and very deep, the carina strong; elytra one-half longer than wide or less, nearly one-half wider than the prothorax, strongly rounded behind, having very feebly glimpsible traces of two or three sutural striæ, the foveæ before basal and at apical third. Length 3.35 mm.; width 1.2 mm. California (one typical example from an unrecorded locality; also one taken by the writer at Lake Tahoe, agreeing well but with more obtusely rounded elytra. . . . . **horni** Hayw.

Prothorax distinctly narrower at base than at apex. 4

4—Form and size nearly as in the preceding, polished, smooth and nearly black, the epipleura and legs flavate, each elytron with a flavate spot behind the humeri, extending inward beyond the middle, its base on the margin extending to the humeri and, at apical third, a transverse fascia, not quite extending to the suture; the reflexed margins are also paler piceous; head fully five-sixths as wide as the prothorax, the antennæ somewhat longer than the elytra, piceous, becoming flavate basally, the medial joints not quite three times as long as wide; prothorax much narrower, only a fifth wider than long, the sides but very finely reflexed, strongly rounded anteriorly, oblique and sinuate behind, becoming parallel in basal sixth, the hind angles right and very sharp; surface convex, the stria fine, not entire, the foveæ very deep and adjoining the fine carina; elytra one-half longer than wide and two-thirds to three-fourths wider than the prothorax, rather sharply ogival in apical two-fifths; the only striæ evident, though feeble, are the first and second toward tip, the eighth well impressed and entire; foveæ at basal and apical fourth. Length (♂♀) 3.0–3.5 mm.; width 1.15–1.3 mm. California (Sta. Barbara to Humboldt) and Nevada (Reno). Abundant; twenty-three examples. [*Ochthedromus mundus* Lec.].

bifasciatum Mots.

Form and coloration nearly as in *bifasciatum* but very much larger, and with the longer antennæ flavate throughout, blackish, with bluish lustre anteriorly, the elytra pale castaneous, each with two flavate spots very nearly like those of *bifasciatum;* epipleura and legs flavo-testaceous; head four-fifths as wide as the prothorax, the sulci rather broad but deep; antennæ very slender, filiform, fully as long as the elytra, the medial joints nearly four times as long as wide; prothorax fully a third wider than long, the sides rather finely reflexed, evenly rounded from apex to near basal fifth, where they become rapidly sinuate and thence parallel for a very short distance before the angles, which are rather sharp, though somewhat more than right; surface nearly as in the preceding, except that the basal foveæ are relatively not so large or deep; elytra longer and more oval, parallel, with distinctly arcuate sides, three-fifths longer than wide and three-fourths wider than the prothorax, not so narrowly rounded in about apical third, the striation subsimilar, the foveæ three in number, situated before basal and behind apical fifth and at the middle. Length (♀) 4.0 mm.; width 1.6 mm. California (Sta. Barbara). Mr. Dunn.

festivum n. sp.

The above species, while obviously forming a well defined subgeneric unit of *Bembidion*, are remarkably isolated among themselves, and the possession of three setigerous discal foveæ in the case of *festivum*, instead of the two characterizing all the other species, as well as constituting the general rule throughout the genus, shows that this character cannot be used to define separate subgeneric groups in the cases of *rickseckeri*, or *scudderi*, these merely forming sections of *Peryphus* and *Notaphus* respectively.

Group VIII—*tigrinum*

Sugbenus **Leuchydrium** nov.

The single species of this group, described by LeConte under the name *tigrinum*, has a very peculiar and distinctive habitus, not only because of its pallid coloration, which is seen in certain other forms of other families inhabiting like environments, but in its parallel and very convex body, deep entire impunctate striæ and short thick antennæ. The mentum tooth is small and very obtusely rounded at tip. The tarsi are moderately long but unusually thick. The two dorsal foveæ of the elytra are obviously attached to the third stria, as in the immediately preceding groups, and by no means discal on the third interval as they are in the *variegatum* group, to which the species was assigned by Hayward. The small series in my collection I owe to the kindness of Mr. Harford, who stated that they were found at night on the beaches about Alameda, California.

Group IX—*ustulatum*

Subgenus **Peryphus** Steph.

Eighty-one species and subspecies of this subgenus, by far the largest of the Eurasiatic groups, are recorded as valid in the European list; the North American components are slightly more numerous, forming next to the largest of our subgenera. The species are characterized in common by having the prothorax always distinctly narrower than the elytra and usually, but not always, subcordiform, by their long slender antennæ, by having the two or three dorsal foveæ of the elytra on or adjoining the third stria, and by having all the striæ distinctly or conspicuously punctate. The

mentum varies from very broadly obtuse, in the *nigrum—concolor* section, to obtusely triangular, as in the large majority of other sections of the group. The coloration of the elytra is often uniform black or brown, but may have nubilous paler basal and subapical areas, or may assume such special forms as seen in *scopulinum*, where the posterior elytral spots are almost as in certain species of the *assimile* group, or in *albidipenne*, where the elytra are pale, with dark apex and dark post-median fascia of irregular form. Again the elytra may be black, with a posterior pallid fascia as in *haplogonum* Chd. (*mannerheimi* || Lec.).

The species known to me may be assigned to eleven distinctly circumscribed sections as follows, all having two dorsal foveæ on the elytra, excepting *rickseckeri*:

Prothorax as wide at base as at apex and sometimes wider.....2
Prothorax always distinctly narrower at base than at apex.....4
2—Eighth stria rather distant from the margin, it, as well as the reflexed margin, coarsely and conspicuously punctate; body small, convex, the striæ obliterated behind; legs rufous.....(*nigrum*) 1
Eighth stria near the margin as usual, it, as well as the reflexed margin, distinctly though not coarsely punctate; body more oblong and less convex, with broader prothorax, the striæ more or less abbreviated; legs blackish.....(*quadrulum*) 2
Eighth stria impunctate, deep and near the margin as usual.....3
3—Body small, black and polished as a rule, the head small, the prothorax nearly quadrate.....(*concolor*) 6
Body larger, diversified in color, polished, the head well developed; striæ entire or abbreviated, the seventh strong and entire to obsolete.....(*transversale*) 17
4—Eighth stria distant from the margin, consisting of an unimpressed series of very coarse punctures, the reflexed margin similarly punctate; body small, convex and with abbreviated striæ, resembling *nigrum* superficially.....(*brevistriatum*) 29
Eighth stria near the margin, deeply impressed and impunctate as usual.....5
5—Body small, polished, black; striæ more or less abbreviated, the head moderately large.....(*californicum*) 30
Body larger, convex, with relatively small head as a rule; striæ more or less abbreviated, the seventh wanting or very feeble..(*ustulatum*) 37
Body similarly larger but usually broader and less convex than in the *ustulatum* section and with small or moderate head, but differing in having entire striæ, the seventh always distinct and entire or nearly so, the foveæ usually rather more conspicuous.
(*honestum*) 59
Body small or moderate, generally somewhat depressed and with the head nearly as in the two preceding, the striæ entire or nearly so,

the seventh barely traceable or wanting; elytra pale, sometimes with a feeble clouded post-median fascia.....(*sejunctum*) 63

Body elongate and subparallel, markedly depressed as in the *planatum* group, the head notably large; striæ very coarse, entire, the punctures small; seventh stria virtually obsolete.....(*grandiceps*) 67

Body slender, small is size, depressed; head rather well developed; striæ entire, punctured, except apically; dorsal punctures three in number.....(*rickseckeri*)

I have not seen *rickseckeri* Hayw., and can therefore add nothing further to the author's description (T. A. E. S., 1897, p. 85). The discovery of three well developed foveæ on the elytra of *festivum* of the *bifasciatum* group, a species otherwise allied to that, as well as to *horni*, and having identical elytral ornamentation, prevents us from founding a distinct group of the genus upon *rickseckeri*.

1—Form oblong-suboval, convex, polished, black, virescent anteriorly, æneous on the elytra, which are just visibly pallescent posteriorly; under surface piceous-black, the abdomen pallescent posteriorly, the legs pale rufous; head (♀) not quite as wide as an elytron, fully three-fourths as wide as the prothorax, with distant moderate sulci; antennæ piceous, gradually pale basally, distinctly shorter than the elytra, the medial joints between two and three times as long as wide, distinctly longer than the ninth or tenth; prothorax transverse, one-half wider than long, the base and apex equal and four-fifths the maximum width, the rounded sides oblique behind, becoming feebly sinuate near the angles, which are right and very sharp; margins narrowly reflexed; anterior impression subobsolete, the posterior distinct; stria biabbreviated; foveæ small, deep and linear, nearly smooth, the carina very short; elytra parallel, nearly one-half longer than wide, scarcely one-half wider than the prothorax, circularly rounded behind; striæ wide, feebly impressed, ending at about apical fourth, very coarsely, not closely punctate, the seventh as distinct as the others; foveæ small, confused with the strial punctures at basal and apical third. Length (♀) 3.8 mm.; width 1.45 mm. New Jersey.....**nigrum** Say

A—Nearly similar but somewhat more elongate and with smaller head, this being much narrower than an elytron (♀), subequal (♂), the antennæ longer, especially in the distal joints, though evidently shorter than the elytra; prothorax subsimilar, the elytra a little longer, with rather deeper striæ; color not so deep black, piceous, the elytra more or less dark castaneous. Length (♂♀) 3.8–4.2 mm.; width 1.45–1.6 mm. Illinois. Four examples.

facile n. subsp.

Form shorter and more ventricose than in *nigrum*, still deeper greenish-black throughout above, the elytra nowhere at all paler; under surface piceous-black, the legs pale rufous; head smaller than in *nigrum*, three-fourths as wide as the prothorax, distinctly narrower than an elytron (♂), the sulci less distant; antennæ longer and more slen-

der, similar in color, about as long as the elytra, the outer joints not notably shorter than the medial and three times as long as wide or nearly; prothorax much narrower and less transverse, two-fifths wider than long, the sides much more feebly arcuate and subevenly so from apex to just before the angles, where they become very feebly sinuate, the angles right and very sharp; surface nearly similar; elytra shorter, not one-half longer than wide and more sharply ogival in about apical third, two-thirds wider than the prothorax; striæ and punctures nearly similar, the former not quite so long. Length (♂) 3.7 mm.; width 1.45 mm. Virginia....**morosum** n. sp.

2—Larger species, the prothorax but slightly inflated, the base but little narrower than the maximum width.....3

Smaller and rather more depressed species, the prothorax inflated anteriorly, with the sides more oblique behind, the base not over four-fifths the maximum width.....4

3—Body elongate, oblong-suboval, rather convex, polished, black, with moderate cupreo-æneous lustre, the under surface black, the legs piceous-black; head three-fourths as wide as the prothorax, not quite as wide as an elytron, the moderate sulci widely separated, the front feebly convex; antennæ black, with piceous basal joint, slender, three-fourths or more as long as the elytra, the medial joints fully three times as long as wide; prothorax scarcely one-half wider than long, the sides feebly arcuate, oblique and broadly, just visibly sinuate in about basal half, the angles scarcely more than right and very sharp; surface with distinct subbasal impression and abbreviated stria, the foveæ at outer fifth deep and linear, the carina fine but rather long and distinct; elytra slightly more than one-half longer than wide and about one-half wider than the prothorax, parallel, ogival in apical third; striæ scarcely at all impressed, the punctures rather coarse, deep, separated by twice their diameters, closer suturally, gradually extinct in about apical fourth, the striæ however faintly visible nearly to the apex; foveæ at two-fifths and two-thirds. Length (♂♀) 3.8–4.5 mm.; width 1.35–1.65 mm. Idaho (Cœur d'Alene),—Wickham.....**quadrulum** Lec.

Body broader, deep black, the anterior parts feebly viridate, the elytra ænescent; under surface and legs similar; head relatively somewhat narrower, two-thirds as wide as the prothorax; antennæ nearly similar; prothorax shorter and much more transverse, three-fifths wider than long, the sides more rounded, not to about the middle but to about basal fourth, where they become distinctly more sinuate, the angles rather more than right but sharp; surface nearly similar, the side margins rather more widely reflexed; elytra not quite one-half longer than wide and two-fifths wider than the prothorax, much more obtusely ogival at tip; striæ broadly and deeply impressed, with convex intervals, the coarse punctures more close-set, gradually obsolete at about apical fourth, the striæ apically more distinct than in *quadrulum*, the foveæ nearer anterior and posterior third. Length (♀) 4.6 mm.; width 1.8 mm. Idaho (Cœur d'Alene),—Wickham.....**tartareum** n. sp.

4—Elytral punctures fine. Body oblong-suboval, distinctly depressed, bright blue-black in lustre throughout above, the under surface and legs black; head fully three-fourths as wide as the prothorax, with moderate and widely separated sulci; antennæ black, moderately slender, three-fourths as long as the elytra, the medial joints between two and three times as long as wide; prothorax one-half wider than long, widest and laterally rather strongly rounded well before the middle, the oblique sides in basal half nearly straight, faintly sinuate near the angles, which are rather obtuse but not rounded; surface smooth, the subbasal impression obsolete medially, the foveæ rather broadly impressed but deep and obliquely linear, near outer fifth; carina short and feeble; elytra evidently less than one-half longer than wide, nearly one-half wider than the prothorax, parallel, obtusely rounded in less than apical third; striæ barely at all impressed, with nearly flat intervals, the small but deep punctures well separated, especially in the female, becoming obsolete near apical fourth, the striæ however faintly subentire; foveæ near two-fifths and apical fourth, the anterior wholly wanting, however, on both elytra of the male type, distinct in the female. Length (♂♀) 3.7–3.9 mm.; width 1.4–1.5 mm. California (Truckee). Two examples. . . . . **callidum** n. sp.

Elytral punctures coarser and deeper, nearly as in *quadrulum*. 5

5—Form oblong-suboval, moderately convex, polished, greenish-black above; under surface deep, the legs slightly less deep, black; head three-fourths as wide as the prothorax and nearly as wide as an elytron; surface nearly as in *callidum;* antennæ black, almost as long as the elytra, the medial joints between two and three times as long as wide; prothorax slightly more than one-half wider than long, widest near apical third; sides evenly rounded and inflated anteriorly, oblique and broadly, feebly sinuate behind, the angles slightly obtuse but very sharp; surface with strong biabbreviated stria, distinct posterior impression, obsolescent at the middle, and well reflexed margins; foveæ deep, slightly rugose and linear, at lateral fifth, the carina long but fine; elytra oblong, parallel, broadly parabolic in apical third, not quite one-half longer than wide and barely two-fifths wider than the prothorax; striæ somewhat impressed, fine and partially abbreviated behind, the punctures strong, moderately coarse, well separated, smaller and closer in the sutural series, the punctures gradually becoming obsolete at about apical third and before the hind foveæ, the foveæ at two-fifths and three-fourths. Length (♀) 3.8–4.2 mm.; width 1.35–1.4 mm. Colorado (Boulder Co., and also one taken by Prof. Snow). . . . . **tritum** n. sp.

Form more slender, similarly deep black and polished, the legs black; head somewhat more than three-fourths as wide as the prothorax, the black antennæ nearly similar but evidently not as long as the elytra, though with the medial joints nearly three times as long as wide; palpi black as in the other species of this section; prothorax much less transverse, less inflated anteriorly, two-fifths wider than long, the sides broadly and moderately arcuate, not so oblique posteriorly and becoming faintly sinuate near the angles, which are more

obtuse but very sharp and subprominent at the apex; surface nearly similar; elytra rather more than one-half longer than wide, parallel, but with more arcuate sides, more gradually rounded basally, more gradually parabolic behind in about two-fifths of the length, two-fifths wider than the prothorax; striæ entire, rather more impressed and more strongly punctate, the punctures smaller posteriorly but distinct to very near the apical margin; foveæ stronger, before two-fifths and behind two-thirds. Length (♂) 3.7 mm.; width 1.25 mm. Colorado. Levette collection.....**ægrotum** n. sp.

6—Striæ entire.....7

Striæ slightly abbreviated externally.....15

Striæ greatly abbreviated, the seventh series very short.....16

7—Eastern species; prothorax subinflated anteriorly and strongly transverse.....8

Western species; prothorax parallel, less transverse and quadrate.....10

8—Color castaneous, the elytra and legs rufous. Under surface blackish-piceous; head three-fourths as wide as the prothorax, the sulci moderate, widely separated; antennæ red-brown, four-fifths as long as the elytra, the medial joints two (♀) to nearly three (♂) times as long as wide; prothorax three-fifths wider than long, the sides rounded anteriorly, oblique posteriorly, becoming sinuate only at the angles, which are right and very sharp; surface smooth, with fine abbreviated stria, moderately reflexed margins and very feeble transverse impressions, scarcely punctate at the foveæ, which are small, moderately deep and at fully outer fifth, the carina short and feeble; sides of the base strongly oblique; elytra oblong, parallel, obtusely parabolic in apical third and barely two-fifths wider than the prothorax; striæ moderately impressed and with rather strong and widely spaced punctures, gradually becoming obsolete at about apical fourth, the striæ coarse and deep, however, to the apex; foveæ at basal and apical third. Length (♂♀) 4.2 mm.; width 1.7 mm. Maine.....**inopinum** n. sp.

Color black, with dark rufous legs.....9

9—Body oblong-oval and markedly convex, shining; head three-fourths as wide as the prothorax, with rather narrow and deep sulci; antennæ longer, black, three-fourths as long as the elytra, the medial joints nearly three times as long as wide and almost equal to the subapical; prothorax fully three-fifths wider than long, the rounded sides converging behind the middle, becoming sinuate at the right and very sharp angles; surface nearly as in the preceding, except that the foveæ are longer and deeper, linear, the carina feeble; elytra nearly as in the preceding but more convex, with the striæ feebly impressed and finer, the punctures similarly limited but smaller and much less widely separated, the apical punctureless parts of the striæ much finer and less impressed; foveæ more or less near basal and apical third. Length (♂♀) 3.8–4.4 mm.; width 1.5–1.7 mm. New York (Lake Champlain). Nine examples.....**concolor** Kirby

Body smaller, more briefly oblong and rather less convex than in *concolor*, shining, black, not metallic, the legs obscure rufous; head relatively smaller, nearly three-fourths as wide as the prothorax though

much narrower than an elytron, the sulci similar; antennæ fuscous, gradually obscure rufous basally, shorter than in *concolor* though about three-fourths as long as the elytra, the medial joints equal to the subapical and twice as long as wide; prothorax three-fifths wider than long, relatively wider basally, the base wider than the apex and but little less than the maximum width; sides broadly arcuate, becoming parallel in about basal fourth, the angles right and sharp; surface nearly similar but with more rugulosity in the latero-basal region, the foveæ deep, more oval, the carina moderate; elytra less than one-half longer than wide, nearly two-fifths wider than the prothorax, parallel, with more rapidly rounded humeri, parabolic in apical two-fifths, the punctures and striæ nearly as in *concolor*, very much less coarse than in *inopinum*, the first, second and fifth deep at apex as in *concolor*. Length (♀) 3.7 mm.; width 1.45 mm. New York (Bluff Point, Lake Champlain).

consessor n. sp.

10—Striæ distinctly impressed and with close-set punctures 11

Striæ barely at all impressed and with well separated punctures, as in *quadrulum* 12

11—Larger species, depressed, nigro-æneous, shining; prothorax quadrate, slightly shorter than wide, the sides rounded anteriorly, almost parallel behind, the hind angles right, finely carinate; stria fine; transverse impressions deep, the foveæ "bistriate" [the meaning of this expression is not clear] and sparsely punctate; elytra elongate-oval, emarginate at base, the striæ closely punctate, the third bipunctate. Length 4.7 mm. New Mexico. Mr. Ulke. **recticolle** Lec.

Smaller species, moderately convex, polished, deep black, without metallic lustre, the legs black; head nearly four-fifths as wide as the prothorax, much narrower than an elytron; antennæ black, slender, the joints between two and three times as long as wide; prothorax not quite a third wider than long, the sides broadly and feebly arcuate submedially, feebly and equally oblique and nearly straight anteriorly and posteriorly, becoming broadly, feebly sinuate in about basal fourth, the angles right and sharp; surface with fine incomplete stria, obsolete anterior and distinct posterior transverse impression, the margins moderately reflexed; foveæ punctate, rather large, moderately deep and sublinear, the carina fine and feeble; elytra three-fifths longer than wide and one-half wider than the prothorax, parallel, with feebly arcuate sides, broadly rounding at the humeri, obtusely ogival in apical third; striæ rather deeply impressed to the apex, the punctures strong, moderately coarse and very close-set, gradually disappearing toward apex, the foveæ at two-fifths and three-fourths. Length (♀) 3.85 mm.; width 1.45 mm. Nevada.

oblatum n. sp.

12—Strial punctures very fine and feeble. Body rather slender, elongate-suboval, very moderately convex, shining and deep black throughout, the legs black; head fully three-fourths as wide as the prothorax and as wide as an elytron to slightly less; palpi black; antennæ black, slender, three-fourths as long as the elytra, the medial joints very nearly three times as long as wide; prothorax a fourth to third

wider than long, parallel, the sides feebly arcuate, slightly oblique behind and just visibly sinuate toward the angles, which are sharp and but little more than right; surface smooth, minutely, feebly punctulate at base, with incomplete stria, very feeble anterior and marked posterior impression, the foveæ shallow, rather finely linear, outside of lateral fourth, the carina fine and feeble; elytra parallel, with feebly arcuate sides, broadly rounding basally, subcircularly rounded at apex, three-fifths longer than wide and nearly one-half wider than the prothorax, the striæ well impressed, rather coarse but with small punctures, which become gradually obsolescent behind the middle; foveæ distinct, at three-sevenths and three-fourths. Length (♂♀) 3.4–4.4 mm.; width 1.2–1.5 mm. California (St. Helena and Sta. Rosa). Thirteen specimens. **tetragonoderum** Chd.

Strial punctures larger and more distinct 13

13—Upper surface depressed, the striæ feebly impressed and with punctures but little larger than in the preceding. Body shorter than in *tetragonoderum*, similarly deep black throughout, the head similar but relatively somewhat larger; antennæ slender, relatively longer, being but little shorter than the elytra, the medial joints about three times as long as wide; prothorax shorter, two-fifths wider than long, the sides more strongly rounded anteriorly, somewhat more oblique and broadly, just visibly sinuate in about basal half, the angles similar; surface nearly similar but with the posterior impression feebler, the punctulate foveæ broadly sublinear and very shallow, the carina fine and very feeble; elytra much shorter, fully one-half longer than wide, two-fifths wider than the prothorax, parallel, with straighter sides, more rapidly rounded at the humeri, obtusely, circularly rounded at apex; punctures gradually obsolescent behind the middle; foveæ at two-fifths and three-fourths. Length (♂) 3.4 mm.; width 1.3 mm. Nevada (Reno) . . . . . **avidum** n. sp.

Upper surface distinctly convex, the striæ more or less deeply impressed, the punctures stronger and more widely separated in the series . . . 14

14—Body narrower and elongate-suboval, shining and deep black throughout, the upper surface feebly subæneous; legs black; head moderate, three-fourths as wide as the prothorax but distinctly narrower than an elytron; antennæ black, three-fourths as long as the elytra, the medial joints not quite three times as long as wide; prothorax a third or more wider than long; base evidently wider than the apex; subparallel, the sides broadly arcuate anteriorly; barely at all converging and broadly, just visibly sinuate posteriorly, the angles nearly right and very sharp; surface smooth, with fine abbreviated stria and feeble, medially interrupted posterior impression, the foveæ smooth, small, obliquely sublinear and deep, the carina very feeble, short and almost obsolete; elytra four-sevenths longer than wide, nearly one-half wider than the prothorax, parallel, the sides more rapidly rounding at base than in *tetragonoderum*, subsimilar at apex, the punctures obsolescent near posterior third; foveæ at two-fifths and three-fourths. Length (♂♀) 3.8–4.0 mm.; width 1.4–1.5 mm. Nevada (locality unrecorded). Three specimens.

pertinax n. sp.

Body stouter than in the preceding, similar in its deep black polished surface, the anterior parts more greenish; head nearly similar, much narrower than an elytron; antennæ black, nearly three-fourths as long as the elytra, the joints similarly elongate; prothorax scarcely a third wider than long, distinctly wider at base than apex, the sides not strongly arcuate anteriorly but more so than in *pertinax*, and rather more oblique and visibly sinuate in about basal half; stria fine but well impressed, not entire; surface feebly punctulate or rugulose at base, the posterior impression obsolete medially as a rule; foveæ linear, moderately deep, the carina very fine and feeble; elytra broader, one-half longer than wide or less, parallel, more sinuate at base, the sides rather rapidly rounding basally, the apex broadly parabolic, not quite one-half wider than the prothorax; punctures more or less distinct in the striæ to the extreme apex; foveæ near basal third and apical fourth. Length (♂♀) 4.2–4.7 mm.; width 1.6–1.8 mm. Utah (Provo),—Wickham. Four examples.

umbraticola n. sp.

15—Form rather narrow and elongate, moderately convex, deep black, with feeble subæneous lustre above; legs black; head fully three-fourths as wide as the prothorax, equal in width to an elytron, the sulci remote and parallel as usual; antennæ black, fully three-fourths as long as the elytra, the medial joints not quite three times as long as wide; prothorax somewhat less than one-half wider than long; base barely wider than the apex, the sides well rounded, distinctly oblique behind the middle, becoming slightly sinuate basally, the angles more than right but subprominently sharp; surface smooth, with fine incomplete stria, the moderate posterior impression subobsolete medially; foveæ finely rugulose, briefly linear medially and rather deep, the carina not very short but fine and feeble; elytra parallel, four-sevenths longer than wide, two-fifths wider than the prothorax, gradually obtusely ogival behind, the striæ well impressed suturally, distinctly punctate, the punctures well separated, obsolescent near the apex suturally, near apical third laterally, where the striæ become very fine and feeble though generally traceable throughout; foveæ near two-fifths and before three-fourths. Length (♂♀) 3.8–4.0 mm.; width 1.4–1.55 mm. New Mexico (Sta. Fé Cañon, Jemez Springs and Las Vegas). Six specimens. Lake Superior,—LeConte ..... **longulum** Lec.

Form not quite so narrow, elongate-suboval, rather convex, polished, black, the upper surface with feeble cupreous lustre; legs black; head rather small, much narrower than an elytron; antennæ black, slender, fully three-fourths as long as the elytra, the medial joints three times as long as wide; prothorax differing much in form, parallel, less than a third wider than long, the sides evenly rounded from apex, becoming straight at base, the angles more than right; widest barely before the middle; transverse impressions feeble, the anterior unusually near the apex; foveæ rather deep, oblique and sublinear, the carina barely traceable; elytra three-fifths longer than wide, one-half wider than the prothorax, parallel, rounded in apical third, the sides nearly straight, rapidly rounding basally; striæ, punctures

and foveæ nearly as in the preceding. Length (♀) 4.25 mm.; width 1.65 mm. New Mexico (Las Vegas).....**porrectum** n. sp.

16—Form oblong-suboval, rather convex, deep polished black, the legs black; head moderate, not quite as wide as an elytron; antennæ unusually short for the present subgenus, three-fourths (♂) to two-thirds (♀) as long as the elytra, deep black, the medial joints barely twice as long as wide; prothorax a fifth to third wider than long, subparallel, the sides well rounded anteriorly, oblique in about basal half, becoming very feebly sinuate near the angles, which are sharp and slightly more than right; margins unusually finely reflexed; surface convex, smooth, with feeble transverse impressions and incomplete stria; foveæ nearly smooth, sublinear, deep, beyond lateral fourth, the carina wanting; elytra fully one-half longer than wide, one-half wider than the prothorax, parallel, the feebly arcuate sides rapidly rounded at base, parabolic behind; striæ impressed suturally, the punctures strong and well separated, both striæ and punctures wholly obsolete in apical third suturally, to half or more laterally; foveæ near basal and apical third. Length (♂♀) 3.3–4.2 mm.; width 1.25–1.4 mm. California (northern coast regions). Eleven specimens.....**humboldtense** Blaisd.

17—Striæ of the elytra entire in great part.....18

Striæ abbreviated more or less at apex.....26

18—Body depressed above, as much so as in the *planatum* group. Head and pronotum black, with greenish lustre; elytra uniformly pale castaneous throughout; under surface rufo-piceous, the abdomen and legs rufous; apical margin of each segment of the former black; head four-fifths as wide as the prothorax, not quite as wide as an elytron, shining, the sulci wide and deep; antennæ red-brown, testaceous at base, nearly three-fourths as long as the elytra, the medial joints more than three times as long as wide; prothorax not quite one-half wider than long, the sides widely and strongly reflexed, rounded anteriorly, converging and distinctly sinuate behind, the angles right; stria fine but well impressed, subentire; foveæ large, slightly rugulose, deeply and linearly impressed medially, the carina rather long but fine; elytra barely one-half longer than wide, one-half wider than the prothorax, obtusely ogival behind, the sides parallel, very feebly arcuate, rapidly rounded basally, the humeri widely exposed and transverse at base; striæ deeply impressed, finely, rather feebly punctate, the seventh wholly wanting, the sixth obsolete, barely traceable as a very fine line under certain angle of reflection. Length (♀) 5.2 mm.; width 2.0 mm. New York (Catskill Mts.).

vulsum n. sp.

Body similar in depression and coloration to the preceding but narrower and more parallel, with relatively much larger prothorax, polished; head well developed, with prominent eyes and deep sulci; antennæ piceous, the two basal joints testaceous, long, slender, filiform, not quite as long as the elytra, the medial joints nearly four times as long as wide; prothorax nearly as in *vulsum* but relatively much larger and barely two-fifths wider than long, differing greatly in having the oblique sides posteriorly not sinuate, the basal angles

slightly more than right but minutely subprominent; sides broadly reflexed as in the preceding; elytra elongate, two-thirds longer than wide, two-fifths wider than the prothorax, the five striæ rather less deeply impressed than in *vulsum* and less coarse, the punctures less concealed and more evident, though but little coarser. Male with the anterior tarsi rather long, feebly and gradually tapering, the basal joint longer than wide, much less than twice as wide as the second and with the inner angle of both prolonged; fifth joint distinctly longer than the three preceding. Length (♂) 4.5–5.3 mm.; width 1.7–1.75 mm. New Jersey (Oak Ridge),—Shoemaker.

filicorne n. sp.

Body always distinctly convex, though moderately as a rule.....19

19—Upper surface wholly black, non-metallic and polished; under surface more piceous black, the legs dark rufous. Head well developed, with unusually prominent eyes, fully four-fifths as wide as the prothorax and even somewhat wider than an elytron, the sulci broad, deep and shining; antennæ three-fourths as long as the elytra, blackish, dark rufous at base, the medial joints not quite three times as long as wide, obconic; prothorax rather more than one-half wider than long, the sides almost evenly arcuate from the very blunt apical to the basal angles, the latter obtuse but sharp and minutely prominent; margins well reflexed basally, very finely apically; surface as in the preceding but more convex, the stria not entire, the transverse impressions fine and feeble and broad and shallow respectively near apex and base; elytra fully one-half longer than wide, two-fifths wider than the prothorax, in form nearly as in *vulsum* but narrower and more convex, the striæ moderately impressed and punctate, the seventh wanting, the sixth distinct as usual basally but obsolescent posteriorly; foveæ similarly near two-fifths and three-fourths. Length (♂♀) 4.4–5.4 mm.; width 1.6–2.0 mm. Pennsylvania (N. Cumberland),—A. B. Champlain.....**champlaini** n. sp.

Upper surface not wholly black, the elytra always with pale areas....20

20—Elytra black, frequently pallescent at base, or with this pale area limited to a small spot at the base of each; subapically, there is always a nubilous bioblique pale fascia.....21

Elytra in great part pale, with more or less definite broad median dark fascia.....22

21—Legs very pale, uniform testaceous throughout. Body oblong, moderately convex, shining, greenish-black; under surface black, the abdomen often partially rufous; head moderate, three-fourths as wide as the prothorax and much narrower than an elytron, the sulci wide, deep and shining, the eyes notably prominent; antennæ piceo-rufous, paler basally, long and slender, four-fifths as long as the elytra, the medial joints between three and four times as long as wide; prothorax a third wider than long, the sides broadly rounded, oblique basally, becoming broadly, very feebly sinuate toward the angles, which are obtuse though sharply subprominent; surface punctulate basally, the foveæ small, deep, oval, the carina very fine; elytra three-fifths longer than wide, three-fourths wider than the prothorax, oblong, very gradually rounded behind; striæ rather

deeply impressed, not coarsely, rather closely punctate, the seventh obsolescent, barely traceable throughout the length; foveæ near basal and apical third; epipleura testaceous to black. Length (♂♀) 7.0–8.0 mm.; width 2.8–3.0 mm. California (coast regions north of San Francisco). Abundant. Thirteen specimens.

haplogonum Chd.

Legs testaceous, the femora piceous-black, nubilously pallid at tip. Body much smaller and narrower, similar in coloration; head and antennæ nearly similar, the latter more slender and not quite so long, the eyes less prominent; prothorax shorter, almost one-half wider than long, the oblique sides posteriorly becoming more sinuate, parallel for a short distance before the angles, which are right and sharp; surface with very feeble impressions and incomplete stria, the foveæ with the deep part longer, more oblique and less well defined, the carina very short and fine; margins well reflexed basally, finely so apically; elytra similar but narrower, rather more than three-fifths longer than wide, one-half wider than the prothorax, the striæ and punctures finer, less impressed, the seventh more distinct; foveæ similar. Length (♀) 6.4 mm.; width 2.25 mm. California (Marin Co.). A single example. . . . . **marinicum** n. sp.

22—Prothorax notably short and transverse. 22

Prothorax but slightly transverse. 23

22—Form broadly suboblong, very moderately convex, shining, the upper surface black, with greenish lustre, the elytra obliquely pale at base and with a transverse suturally sinuate fascia behind apical third, not prolonged on the suture; under surface black, the epipleura partially pale, the legs testaceous; head moderate, much narrower than the prothorax or an elytron, the eyes only moderately prominent; antennæ slender, blackish, testaceous basally, the medial joints fully three times as long as wide; prothorax one-half to three-fifths wider than long, the oblique sides posteriorly broadly and but just visibly sinuate toward the angles, which are obtuse but with their apex minutely acute and prominent; base arcuate; posterior impression broad and distinct; margins strongly reflexed basally, finely apically as usual in this section; foveæ rugulose, large, sublinear, deep, nearly one-fourth the total length, the carina very fine; elytra oblong, well rounded behind, parallel, one-half wider than the prothorax, the striæ rather fine, not impressed, except internally, rather finely punctate, the punctures widely separated; seventh stria barely traceable as a series of very remote and minute punctulation; foveæ near basal third and apical fourth. Length (♂♀) 6.4–7.0 mm.; width 2.4–2.8 mm. Michigan (Marquette) . . . . . **transversale** Dej.

Form somewhat as in *transversale* but with still shorter prothorax and longer elytra, the latter almost entirely ochreous, with a small faint post-scutellar cloud on each, and with a very faint nubilous dark fascia just behind the middle, prolonged somewhat posteriorly at the suture, the apex also faintly blackish; epipleura and legs testaceous; head nearly as in the preceding, the antennæ colored similarly and very slender, longer, four-fifths as long as the elytra; prothorax two-thirds to three-fourths wider than long, the arcuate

sides becoming more oblique behind, abruptly more sinuate just before the angles, which are right, very sharp and prominent; surface nearly similar but the margins are more equally reflexed throughout the length; elytra oblong, three-fifths longer than wide, two-fifths wider than the prothorax, more rapidly and obtusely rounded at tip; striæ rather fine, just visibly and evenly impressed throughout the width, the seventh a fine loose entire series; punctures everywhere notably fine and separated by more than twice their diameters; foveæ small, near two-fifths and two-thirds. Length (♂ ♀). 6.0–6.3 mm.; width 2.4–2.6 mm. Wyoming (Cheyenne),—Wickham. **perspicuum** Lec.

23—Elytral punctures strong and widely separated in the series—by nearly twice their diameters as a rule. Body smaller and rather more depressed than in the three following, black, with subæneous lustre, the neck testaceous, the elytra testaceous, with a rather sharply defined transverse black fascia just behind the middle, somewhat prolonged suturally; under surface black, the epipleura and legs testaceous; head fully three-fourths as wide as the prothorax, the eyes moderately prominent; antennæ long, slender and testaceous; prothorax a third wider than long, widest at two-fifths from apex, the sides rounded, oblique behind, becoming parallel for a short distance from the angles, which are right; stria strongly impressed, extending between the feeble impressions; foveæ large, punctulate, with a deeper central part, the carina very short, not attaining the angles; elytra oblong, parallel, circularly rounded behind, three-fifths longer than wide and one-half wider than the prothorax; striæ moderate, the seventh a subobsolete series of very minute punctules; foveæ at three-sevenths and three-fourths. Length (♂) 6.5 mm.; width 2.35 mm. Colorado (Cañon City),—Wickham..... **sarpedon** n. sp.

Elytral punctures close-set in the series.....24

24—Head smaller, with moderately prominent eyes, much narrower than an elytron. Body short, rather convex, greenish-black, the neck barely at all pallescent; elytra flavo-testaceous, with a broad and nubilous dusky median fascia, longest toward the suture; under surface black, the abdomen more or less rufescent, the legs pale; head scarcely three-fourths as wide as the prothorax, the antennæ long, slender, fuscous, pale basally; prothorax a third wider than long, widest barely before the middle, the sides broadly rounded, generally quite to the angles, which are minutely prominent and very sharp; margins strongly reflexed even apically; surface sparsely punctate basally, having feeble transverse impressions and a very fine and scarcely impressed stria between them; foveæ elongate, linear, moderately deep, the carina very short, at the angles as usual; elytra but little over one-half longer than wide, parallel, broadly ogival at apex, two-thirds wider than the prothorax, the striæ moderate, subequally and slightly impressed throughout, the punctures very moderate, separated by their own diameters or less, the seventh stria barely traceable and in part only by a very fine series; foveæ small, at two-fifths and two-thirds. Length (♂ ♀) 6.7–7.6 mm.;

width 2.35–2.9 mm. New Mexico (Jemez Springs and Las Vegas) and Utah (St. George),—Wickham. Abundant. Seventeen specimens. . . . . **acomanum** n. sp.

Head larger, subequal in width to an elytron 25

25—Form elongate, rather convex, piceous-black, with greenish lustre, the neck and a few small spots near the sides of the pronotum nubilously paler, the elytra obscure testaceous, the broad medial band so feeble and nubilous as to be barely traceable; under surface black, the abdomen partially rufous, the epipleura rufous, the legs pale flavo-testaceous; head fully four-fifths as wide as the prothorax, with moderately prominent eyes, the antennæ fuscous, paler basally, long and slender; prothorax parallel, about a fourth wider than long, the sides broadly arcuate and more feebly so than usual, becoming very feebly sinuate toward the hind angles, which are rather more than right but neither blunt nor markedly prominent; surface nearly as in the preceding; elytra three-fifths longer than wide and more than two-thirds wider than the prothorax, parallel, with broadly arcuate sides, very gradually and strongly rounded behind; striæ rather coarse and impressed, the punctures strong and notably close-set, the seventh stria virtually wanting; foveæ before anterior and at posterior third. Length (♀) 7.3 mm.; width 2.65 mm. Arizona (Tuçson). . . . . **excursum** n. sp.

Form less elongate, similarly convex and shining, black, with greenish lustre, the elytra yellow-brown, with a broad and moderately definite black median fascia, prolonged slightly medially behind; under surface piceous-black, the legs flavate; head three-fourths as wide as the prothorax, with remarkably prominent eyes, the antennæ long, slender, fuscous, paler basally; prothorax shorter than in the two preceding, two-fifths wider than long, the sides subprominently rounded before the middle, oblique and straighter anteriorly and posteriorly, slightly sinuate just before the basal angles, which are scarcely more than right, sharp and evidently prominent; surface nearly as in the preceding, the carina obsolete or indistinct; elytra parallel, with scarcely arcuate sides, circularly rounded in apical third, one-half longer than wide, barely one-half wider than the prothorax; striæ abrupt and scarcely at all impressed, the seventh series fine but usually distinct and entire; punctures small and close-set; foveæ at two-fifths and two-thirds. Length (♂♀) 5.8–7.0 mm.; width 2.15–2.75 mm. California (coast regions from San Francisco northward. San Diego,—LeConte). Abundant. Thirteen specimens. [*Ochthedromus mannerheimi* || Lec.?]. . . . . **erosum** Mots.

26—Body notably depressed, the thoracic base much wider than the apex. Polished black, with but faint metallic lustre anteriorly, the elytra uniform pale castaneous in color; under surface black, the legs pale rufous; head three-fourths as wide as the prothorax, much narrower than an elytron, the shining sulci coarse and very deep; eyes large but not very prominent; antennæ long, slender, fuscous, paler basally, almost as long as the elytra, the medial joints three times as long as wide, cylindric; prothorax a fourth wider than long, the sides evenly and rather strongly rounded, oblique and feebly

sinuate basally, the angles right, sharp and very prominent; surface smooth and impunctate throughout, the impressions obsolescent, the stria fine, greatly biabbreviated; foveæ smooth, very deep, elongate-oval, the carina very faint, subobsolete; elytra parallel, three-fifths longer than wide, two-thirds wider than the prothorax, obtusely ogival in about apical third; striæ barely at all impressed, the sixth obsolete behind about the middle, the seventh wholly wanting; punctures moderate; foveæ at two-fifths and two-thirds. Length (♀) 6.0 mm.; width 2.4 mm. New Mexico (somewhere on the road between Ft. Wingate and Jemez Springs),—Woodgate.

badiipenne n. sp.

Body very moderately convex as in *erosum;* thoracic base always at least somewhat wider than the apex.....27

27—Elytra and upper surface deep bluish or greenish black throughout, the neck sometimes faintly pallescent. Body oblong, highly polished throughout, black beneath, the legs pale rufous; head rather small, not three-fourths as wide as the prothorax and very much narrower than an elytron, with only moderately prominent eyes and deep sulci; antennæ long, slender, fuscous, pale basally; prothorax two-fifths wider than long, the sides strongly rounded anteriorly, long and oblique posteriorly, becoming sinuate only at the angles, which are sharp and minutely prominent; surface smooth, the impressions and stria nearly as in the preceding, the posterior impression feeble but evident, the deep foveæ nearly similar but less abrupt and slightly rugulose; elytra one-half longer than wide to somewhat more, the parallel sides feebly arcuate, two-thirds wider than the prothorax, convex, the striæ rather coarse and deeply impressed, strongly punctate, the seventh fine and obsolescent, sometimes feebly traceable; foveæ at two-fifths and two-thirds. Length (♂♀) 6.4–7.2 mm.; width 2.3–2.6 mm. New Mexico (Jemez Springs, Las Vegas and other parts of the Rio Grande Valley).....**lugubre** Lec.

A—Similar to *lugubre* but broader, the prothorax only a fourth wider than long, the oblong elytra longer, three-fifths longer than wide, the striæ more abbreviated, the sixth only visible to about the middle, the seventh wanting. Length (♂♀) 6.5–7.1 mm.; width 2.3–2.8 mm. Arizona (Tuçson). La Veta, Colo., and San Diego, Cal.,—LeConte.....**stabile** Lec.

B—Similar to *lugubre* but smaller and especially narrower, differing also in the prothorax, which, though similarly transverse and rounded laterally, has the posterior sinus of the sides much stronger, the sides becoming parallel for a considerable distance before the right and very sharp angles; elytral striæ nearly similar but less impressed and with the punctures less close-set. Length (♂♀) 6.2–6.5 mm.; width 2.2–2.4 mm. Arizona (probably near the southern boundary).....**vafrum** n. subsp.

Elytra and upper surface deep black, the neck feebly pallescent basally, the elytra bluish-black, with a conspicuous bioblique testaceous subapical fascia, prolonged on the suture to the apex. Under surface black, the legs testaceous; head fully four-fifths as wide as the prothorax, not quite as wide as an elytron; antennæ long, slender, the

apices of the joints beyond the second infuscate; prothorax barely a fourth wider than long, the sides evenly rounded to within a short distance of the base, there rapidly strongly sinuate and parallel thence to the angles, which are right and very sharp; surface with feeble impressions and fine incomplete stria, the foveæ sparsely punctate, deep and linear, beyond lateral fifth, the carina obsolete; margins strongly reflexed, finely so apically; elytra fully three-fifths longer than wide and three-fourths wider than the prothorax, subparallel, gradually ogival in apical two-fifths; striæ rather coarse but barely at all impressed, strongly, rather closely punctate, the sixth obsolete a little behind the middle, the seventh wholly obsolete; foveæ near basal and apical third. Length (♀) 6.5 mm.; width 2.5 mm. Arizona (probably southern). One example.

canonicum n. sp.

Elytra in great part pale in color, usually variegated somewhat as in *erosum* or *ustulatum* 28

28—Elytra pale testaceous throughout, without darker maculation. Anterior parts polished, black, the neck rufescent; under surface piceous-black, the abdomen in great part rufescent, the legs pale testaceous; head well developed and with prominent eyes, though not quite as wide as an elytron, more than three-fourths as wide as the prothorax, the sulci moderately deep or wide; antennæ long and slender, fusco-testaceous, clearer basally; prothorax scarcely more than a fourth wider than long, the sides rounded, oblique in nearly basal half, becoming very moderately sinuate toward the angles, which are barely more than right but sharp and subprominent; surface with very evident transverse impressions and a fine stria between them; foveæ nearly smooth, long, deep and linear, the carina obsolete; margins as in the preceding and most others of this section; elytra three-fifths longer than wide and four-fifths wider than the prothorax, broadly ogival in about apical third, parallel, with feebly arcuate sides, rapidly rounded at the humeri; striæ unimpressed, feebly so suturad; punctures strong, separated by their diameters, smaller and close in the sutural striæ; sixth stria extending three-fifths, the seventh completely wanting; foveæ near basal and before apical third. Length (♂) 6.8 mm.; width 2.65 mm. Utah (St. George),—Wickham. Two exactly similar specimens.

retectum n. sp.

Elytra pale testaceous, angularly dark at the scutellum and with a bioblique paler subapical fascia, which is bordered anteriorly by a nubilous dark fascia, the apex behind the pale fascia also blackish. Anterior parts black, with subæneous lustre, the neck pale at base; under surface black, the abdomen feebly paler at apex, the legs testaceous; head and antennæ nearly as in the preceding, the eyes not quite so large; prothorax shorter, two-fifths wider than long, the sides strongly rounded, less so and oblique behind, becoming parallel for a very short distance from the angles, which are right, sharp and slightly prominent; surface nearly as in the preceding, the carina, however, sometimes distinct though fine; elytra one-half longer than wide and fully one-half wider than the prothorax, gradually obtusely

ogival behind; striæ deeply impressed suturad, scarcely so laterad, with rather strong and somewhat ununiform punctures, the sixth stria extending three-fifths, the seventh barely traceable as a loose series of very minute punctules; foveæ at two-fifths and two-thirds. Length (♂♀) 5.7–6.3 mm.; width 2.2–2.4 mm. New Mexico (Jemez Springs and on the road to Fort Wingate) and Colorado. Twelve specimens..... **animatum** n. sp.

Elytra castaneous, ornamented, as in *ustulatum*, with a nubilous elongate humeral paler area on each, and a common bioblique subapical fascia, which is also nubilously defined. Body moderately stout and convex, polished, piceous-black, with feeble lustre anteriorly, beneath piceous, the abdomen in great part rufous, the legs flavo-testaceous; head rather small, with deep sulci and moderately prominent eyes, the antennæ long and slender, fusco-testaceous, clearer basally; prothorax large, barely a fifth wider than long, the sides subevenly rounded to the basal angles, which are minutely prominent and sharp; margins strongly reflexed basally, very finely near the apex; surface smooth, the anterior impression fine and angular, the posterior large and distinct, the stria between them fine; foveæ deep and long, linear, the carina obsolete; elytra nearly two-thirds longer than wide, only one-half wider than the prothorax, parallel, with very feebly arcuate sides, gradually parabolic behind; striæ rather deeply impressed suturad, unimpressed laterad, having unusually coarse, deep and well separated punctures, the sixth extending three-fifths, the seventh completely wanting; oblique apical part of the fifth stria short and not conspicuous; foveæ deep, near two-fifths and two-thirds. Length (♂♀) 6.8–7.4 mm.; width 2.75–2.8 mm. Colorado and New Mexico (Jemez Springs).. **pernotum** n. sp.

29—Body small in size, convex, ventricose, polished, piceous-black, the legs pale rufous; head moderate, with narrow shining sulci and well developed eyes, nearly four-fifths as wide as the prothorax; antennæ slender, fuscous, paler basally, three-fourths as long as the elytra, the medial joints between two and three times as long as wide; prothorax a third to two-fifths wider than long, the sides strongly rounded, converging basally and becoming parallel for a short distance before the angles, which are right; surface convex, very smooth, with feeble impressions and fine and much abbreviated stria; foveæ smooth, small, oval and very deep, close to the rather distinct carina; elytra oblong, two-fifths longer than wide, two-thirds wider than the prothorax, rapidly and obtusely ogival in apical third, the striæ unimpressed, consisting of rows of very coarse and widely separated punctures, obsolete in apical third, the eighth consisting of a row of very large deep punctures, notably distant from the margin, feebly impressed, becoming unimpressed basally, the marginal stria also deep and strongly punctured; foveæ at apical and before basal third. Length (♂♀) 3.35–3.8 mm.; width 1.25–1.4 mm. California (coast regions from San Francisco Bay northward). Thirteen specimens. **brevistriatum** Hayw.

30—Elytral striæ very much abbreviated, extending as a rule barely beyond the middle, the eighth less widely separated from the margin..31

Elytral striæ but slightly and generally only in part abbreviated.....32

31—Body black, highly polished, with very feeble subæneous lustre; under surface piceous, the legs rufous; head fully four-fifths as wide as the prothorax and as wide as an elytron, the antennæ slender, fuscous, gradually pale basally, as long as the elytra, the medial joints not quite three times as long as wide; prothorax scarcely a fifth wider than long, rounded laterally in about apical half, oblique posteriorly, the sides becoming gradually parallel near the right angles; surface very smooth and convex, with distinct transverse impressions, the stria between the two rather strong; foveæ elongate-oval, very deep and near the long and rather distinct carina; margins somewhat finely reflexed; elytra one-half longer than wide and nearly three-fifths wider than the prothorax, parallel, with broadly and feebly arcuate sides, gradually parabolic behind; striæ not definitely impressed, consisting of rows of rather coarse, widely separated punctures, becoming obsolete just behind the middle, the seventh row equally strong but becoming obsolete at basal third; foveæ at anterior and posterior third. Length (♂) 3.4 mm.; width 1.2 mm. California (Sta. Ana Cañon),—Wickham.....**californicum** Hayw.

Body similar in coloration, but with the legs darker or more piceo-rufous, the form more abbreviated; head larger, four-fifths as wide as the prothorax and fully as wide as an elytron, the sulci similarly deep, smooth and parallel; antennæ shorter and thicker, not quite as long as the elytra, blackish, piceous basally, somewhat thickened distally, the medial joints barely twice as long as wide; prothorax very much shorter and strongly transverse, one-half to three-fifths wider than long, the sides anteriorly still more strongly arcuate, very convergent in about basal half, becoming parallel in basal fourth or fifth, the angles right; surface throughout, as well as the foveæ, nearly as in the preceding, the basal margin somewhat rugulose; elytra shorter, not quite one-half longer than wide and less than one-half wider than the prothorax, gradually narrowed and strongly rounded in fully apical two-fifths; striæ wholly unimpressed, the punctures rather less coarse, widely separated and becoming obsolete near three-fifths from the base, the seventh extending nearly to the middle; foveæ at basal and rather behind apical third. Length (♀) 3.4–3.5 mm.; width 1.25 mm. California (Hoopa Valley, Humboldt Co.). Two examples.....**innocuum** n. sp.

32—Form notably broad, the elytra only two-fifths longer than wide. Body moderately convex, deep and polished black, without metallic lustre, the legs piceous-black; head three-fourths as wide as the prothorax, much narrower than an elytron, the sulci rather shallow; antennæ black, piceo-rufous at base, not as long as the elytra, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long, the sides evenly and narrowly reflexed, strongly and evenly rounded but becoming abruptly parallel and straight in about basal fourth, the angles right; base not evidently narrower than the apex, transversely truncate; surface sparsely punctulate at base, with very feeble impressions and distinct subentire stria; foveæ large, deep, oval and impressed,

close to the very fine and shorter carina; elytra relatively large, nearly three-fifths wider than the prothorax, parallel, with feebly arcuate sides, obtusely rounded behind; striæ fine, scarcely at all impressed and with fine and moderately separated punctures, gradually obsolete toward posterior third, the striæ, except the sutural, not entire, the second and fifth deeper at apex; seventh stria obsolete; foveæ before basal and before apical third. Length (♂) 4.35 mm.; width 1.65 mm. Colorado (Eldora).... **scrutatum** n. sp.

Form narrower, the elytra at least one-half longer than wide.....33

33—Prothorax short and transverse; third antennal joint relatively shorter, scarcely a third longer than the second.....34

Prothorax less transverse, more broadly and less prominently rounded at the sides anteriorly; third antennal joint much more elongate in both sexes.....35

34—Form narrow, very moderately convex, polished, black, the legs rufo-piceous; head rather small, narrower than an elytron, the sulci deep, parallel as usual; antennæ black throughout, very slender, not quite as long as the elytra, the medial joints between two and three times as long as wide; prothorax three-fifths wider than long; base distinctly narrower than the apex; sides becoming rapidly parallel and straight in basal sixth, the angles but little more than right; surface slightly rugose at base, the impressions very feeble, the stria fine and limited by them; foveæ linear, deeply impressed, near the very fine carina; elytra parallel, with feebly arcuate sides, gradually rounded behind, two-fifths wider than the prothorax; striæ fine, feebly impressed, finely punctured, nearly as in the preceding, the seventh a series of extremely minute and remote punctures to about apical fourth; foveæ at basal and behind apical third. Length (♂) 3.7 mm.; width 1.3 mm. Colorado (Boulder Co.).

denveranum n. sp.

Form slightly stouter and rather more convex, polished, black, the elytra castaneous, the legs piceo-rufous; head large, four-fifths as wide as the prothorax and even somewhat wider than an elytron, the bounding ridge of the sulci rather prominent; antennæ stouter than in the preceding, three-fourths as long as the elytra, black throughout, the medial joints between two and three times as long as wide; prothorax nearly three-fifths wider than long, similarly widest near apical third, the sides becoming parallel only very near the angles, the sinus being broader; surface as in *denveranum*, except that the deep foveæ are more briefly oval and not quite so near the short fine carina; elytra rather broader, fully one-half wider than the prothorax, the subparallel sides broadly arcuate, the striation and punctures nearly similar, except that the punctures are still smaller and are more close-set in the series; foveæ nearer anterior and posterior third. Length (♀) 4.2 mm.; width 1.5 mm. Utah..... **tractabile** n. sp.

35—Elytra nearly parallel, longer and with almost straight sides. Elongate, only slightly convex, polished, black, the elytra faintly piceous, each with a faint nubilous rounded external spot near apical third; under surface black, the legs bright rufous; head more than three-fourths as wide as the prothorax, but not quite as wide as an elytron;

antennæ slender, blackish, the basal joint rufous, three-fourths as long as the elytra, the medial joints scarcely less than three times as long as wide; prothorax scarcely one-half wider than long, widest just before the middle, the oblique sides posteriorly becoming sinuate, thence parallel and straight for a short distance to the angles, which are right and sharp; base barely at all narrower than the apex; surface smooth, not evidently rugose at base, nearly as in the preceding species, the foveæ long, linear and deep, the carina rather long and distinct; elytra three-fifths longer than wide, one-half wider than the prothorax, circularly rounded at tip; striæ fine, unimpressed, obsolescent near posterior third, except the first and second, which are entire; punctures fine and widely separated, closer suturad, the seventh stria a series of very minute and remote punctules; foveæ at basal and behind apical third. Length (♀) 4.2 mm.; width 1.45 mm. Colorado (Boulder Co.).....**actuosum** n. sp.

Elytra less elongate, oblong-oval, not maculate.....36

36—Form elongate-suboval, convex, polished black, with feeble æneous lustre, the elytra nubilously and feebly rufescent basally; under surface black, the legs and epipleura dark rufous; head notably small and with the eyes unusually flat, two-thirds as wide as the prothorax and two-fifths as wide as the elytra, the sulci short, not extending to the apex; antennæ black, rufous at base, three-fourths as long as the elytra, the medial joints barely more than twice as long as wide; prothorax two-fifths wider than long, the well rounded sides becoming parallel in about basal sixth, the angles right; base much narrower than the apex; margins moderately reflexed; surface longitudinally rugose at base, with the foveæ rather short, oblique and very deep, otherwise as in the preceding species; elytra oval, with arcuate sides, widest at the middle, one-half longer than wide, three-fifths wider than the prothorax; striæ not very fine, slightly impressed suturad, excepting the first two obsolescent before the apex; punctures small, moderately close-set, those of the seventh series very minute and less close; foveæ as usual nearly at basal and apical third. Length (♀) 3.7 mm.; width 1.35 mm. New Mexico. F. H. Snow.....**viaticum** n. sp.

Form elongate but more parallel, similarly convex, deep black and polished throughout above, black beneath, the femora nearly pure black, the tibiæ and tarsi rufescent; head moderate, with more convex eyes, three-fourths as wide as the prothorax and subequal in width to an elytron, the sulci normally long; antennæ blackish, piceo-rufous at base, three-fourths as long as the elytra, the medial joints (♂) nearly three times as long as wide, slightly shorter (♀); prothorax relatively larger, two-fifths wider than long, the evenly rounded sides abruptly becoming straight and parallel in basal fifth or sixth, the angles right; surface nearly as in the preceding, the coarsely rugose foveæ larger, less definitely linear at the bottom, the carina rather long and distinct; elytra somewhat more than one-half longer than wide, scarcely one-half wider than the prothorax, subparallel, with moderately arcuate sides, broadly parabolic at

apex; striæ fine, barely at all impressed, obsolescent posteriorly, even more so than in *viaticum*, the punctures fine and, except suturally, rather widely spaced, the seventh series barely traceable. Length (♂ ♀) 3.9–4.0 mm.; width 1.5–1.55 mm. New York (Lake Champlain). Five examples.....**nitens** Lec. (catalogue name)

A—Similar to *nitens* but larger and rather stouter, the head somewhat larger; prothorax slightly shorter, one-half wider than long, otherwise nearly similar; palpi black as usual in this subsection; elytra similar but not quite so elongate and scarcely over two-fifths wider than the prothorax, similarly striate and punctate, except that the punctures are less widely separated. Length (♂ ♀) 4.3–4.35 mm.; width 1.65 mm. Colorado (Eldora and also from the Levette cabinet).....**seductum** n. subsp.

37—Elytra uniform in color, generally black, sometimes feebly and indefinitely paler apically as in *texanum* and *cogitans*, but never definitely maculate.....38

Elytra uniform or very nearly, but always having a posterior bioblique pale fascia, which is often reduced to an external spot on each...47

Elytra of the *ustulatum* type in ornamentation, castaneous, nubilously paler externally toward the humeri and also with the bioblique posterior fascia of the preceding subsection.....56

38—Basal thoracic angles very acute, everted and prominent. Body slender, convex, shining, black, or with just visible piceous tinge, the under surface piceous, the legs bright rufous; head longer than wide, the eyes not very prominent, three-fourths as wide as the prothorax and not quite as wide as an elytron; antennæ rufo-piceous, clearer basally, rather long, the medial joints more than three times as long as wide, feebly obconic; prothorax barely a fourth wider than long, the sides evenly and strongly rounded, converging posteriorly, becoming suddenly sinuate only at the angles, widest at two-fifths from apex; base subequal to the apex; surface very convex, smooth, the impressions subobsolete, the stria fine and long but not quite entire; foveæ very deeply impressed, elongate, linear, near outer fifth, the carina distinct; elytra oval, with distinctly arcuate sides, very gradually strongly rounded behind, three-fifths longer than wide, barely two-fifths wider than the prothorax; striæ feebly impressed, not fine, the discal obsolescent at three-fifths; punctures strong, well separated except suturad; seventh stria obsolete, the minute punctules scarcely traceable; foveæ near basal and apical third. Length (♂) 5.3 mm.; width 1.85 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend.

***citulum** n. sp.

Basal angles right, the sides near them straight and parallel.....39

39—Head narrow, not so wide as the thoracic apex, the eyes but feebly convex. Upper surface somewhat depressed, black, polished, with feeble greenish lustre, the elytra very faintly picescent; under surface piceous, the legs bright rufous; head two-thirds as wide as the prothorax, very much narrower than an elytron; antennæ long, brownish-testaceous, the medial joints three times as long as wide; prothorax scarcely two-fifths wider than long, the sides evenly and

strongly arcuate to basal fifth, becoming there rapidly sinuate and thence parallel to the right angles, which are very sharp; base distinctly narrower than the apex; surface smooth, moderately convex, with subobsolete impressions and subentire stria; foveæ small, smooth, very deep and elongate-oval, the carina obsolete; elytra parallel, with very feebly arcuate sides, rather rapidly rounding in posterior third, somewhat more than one-half longer than wide, one-half wider than the prothorax; striæ rather coarse, deeply impressed, obsolete only near the apex, the punctures deep and somewhat coarse, moderately separated; seventh stria a distinct series of very small and distant though obvious punctures; foveæ behind both basal and apical third. Length (♀) 5.6 mm.; width 2.0 mm. New Mexico (Jemez Springs),—Woodgate. . . . . **inquietum** n. sp.

Head with normally prominent eyes, as wide as the thoracic apex. . . . 40

40—Body dark castaneous in color, never deep black. Elongate, rather convex, shining; legs rufous; head fully three-fourths as wide as the prothorax but not as wide as an elytron; antennæ long, fusco-testaceous, the medial joints rather more than three times as long as wide; prothorax a third wider than long, the sides broadly, evenly rounded, becoming rather gradually sinuate posteriorly and parallel only near the angles, which are right and sharp; surface smooth, convex, with fine angular anterior, and broad strong posterior, impression, the stria fine, biabbreviated; foveæ rather large, very deep, oval, the carina obsolete; elytra one-half longer than wide and fully one-half wider than the prothorax, often just visibly inflated posteriorly, the sides feebly arcuate; striæ rather coarse, moderately impressed, fine, obsolescent near apical fourth, the punctures strong, deep, well separated; seventh stria virtually obsolete; foveæ near basal and apical third. Length (♂♀) 4.8–5.8 mm.; width 1.8–2.2 mm. Arizona (near the southern boundary). Morrison. Seven specimens. Two examples labeled "Mex." from the Levette collection represent a slightly smaller variety. . . . . **subangustatum** Hayw.

Body deep black when mature, piceous-black in *merens*, usually with greenish lustre. 41

41—Legs pale rufous throughout. 42

Legs rufous, the femora blackish, with pale tip. 45

42—Prothorax less narrowed posteriorly, the base but barely visibly narrower than the apex. Deep black above and beneath, the upper surface with feeble greenish tinge; head large, four-fifths as wide as the prothorax and as wide as an elytron, the sulci deep; antennæ piceous, rufous at base, long, the medial joints obconic and three times as long as wide; prothorax two-fifths wider than long, the sides broadly, strongly and subevenly rounded, becoming sinuate basally and parallel in fully basal fifth, the angles right and sharp; margins rather narrowly reflexed; surface smooth, punctulate at base, the latter depressed; anterior impression very feeble, angular, the stria strong and subentire; foveæ very large and deep, rugulose, the bottom linear, the carina long and distinct; elytra oblong-oval, the sides distinctly arcuate, rather gradually rounded basally, gradually strongly rounded behind, one-half longer than wide and nearly one-

half wider than the prothorax; striæ coarse, rather deeply impressed, fine and obsolescent only very near the apex; punctures coarse, deep, moderately close, obsolescent near apical fourth; seventh stria represented by a distinct series of minute punctures; foveæ strong, near basal and apical third. Length (♀) 5.4 mm.; width 2.3 mm. British Columbia (Victoria),—Wickham.

insopitans n. sp.

Prothorax strongly narrowed behind, the base much narrower than the apex; elytra feebly and very nubilously rufescent apically as a rule; seventh stria subobsolete.....43

43—Sides of the prothorax abruptly parallel in basal fifth or sixth. Body short and strongly convex, highly polished throughout, bluish-black; head well developed, three-fourths as wide as the prothorax and as wide as an elytron; antennæ long, slender, fuscous, gradually testaceous basally; prothorax relatively large, convex, a third wider than long; base not three-fourths the maximum width, the sides evenly and strongly rounded to the abrupt short posterior sinus; surface smooth, the impressions subobsolete, the stria fine, abbreviated in front; foveæ small, smooth, short, linear and very deep, the carina extremely short and fine; elytra scarcely one-half longer than wide, two-fifths wider than the prothorax and less than three times as long, the sides broadly arcuate, rapidly rounding at the humeri, ogival in posterior two-fifths, the striæ coarse and deep, becoming wholly obsolete in apical fifth or sixth; punctures notably coarse and deep, separated by barely their diameters, rapidly obsolescent at the ends of the striæ; foveæ moderate, near basal and apical third. Length (♂) 5.3 mm.; width 1.9 mm. A single Levette specimen, probably from Indiana.....**histricum** n. sp.

Sides of the prothorax becoming parallel only very near the basal angles; elytra more elongate.....44

44—Form elongate, convex, highly polished throughout, greenish-black above; head moderate, three-fourths as wide as the prothorax, distinctly narrower than an elytron, the sulci deep; antennæ long, as in the preceding species, fuscous, gradually testaceous basally; eyes not so strongly convex as in some others of this subsection; prothorax relatively much smaller than in the preceding or succeeding species, a third wider than long, convex, the sides strongly rounded, becoming rather abruptly sinuate near the base; surface smooth, the impressions very feeble, the stria very fine, biabbreviated; foveæ moderate, linear, smooth, very deep, close to the moderately strong distinct carina; elytra three-fifths longer than wide, rather more than one-half wider than the prothorax, gradually ogival behind, the sides but feebly arcuate, the humeri rather rapidly rounded; striæ moderate, somewhat feebly impressed, obsolete near apical sixth or seventh; punctures only moderately coarse and widely separated—by fully twice their diameters in most cases; foveæ moderate, near basal and apical third. Length (♂♀) 5.3–6.0 mm.; width 1.9–2.15 mm. Texas (Austin) and Iowa (Keokuk). A very pale brownish-yellow specimen from New Mexico and another similar from Missouri, do not seem to differ specifically, though there are

no other evidences of immaturity than the very uniform pale coloration. Ten specimens. . . . . **texanum** Chd.

Form elongate and convex but less ventricose, the prothorax much more transverse; head larger and scarcely at all narrower than an elytron, with more prominent eyes, fully three-fourths as wide as the prothorax, which is one-half wider than long, with strongly rounded sides, becoming rapidly parallel only very near the angles, which are right and sharp; surface nearly similar, except that the very deep linear foveæ are more distant from the fine carina; elytra barely more than one-half longer than wide and scarcely more than a third wider than the prothorax, otherwise nearly as in *texanum*, except that they are more rufescent behind and that the elytral striæ become obsolete near apical fourth or fifth. Length (♂) 5.5 mm.; width 2.2 mm. Two examples from the Levette collection, probably taken in Indiana. . . . . **cogitans** n. sp.

Form elongate, moderately convex, black, with bluish lustre, the elytra not highly polished as in the preceding but apparently somewhat alutaceous; legs similarly rufous; antennæ long and slender; prothorax widest near apical third, two-fifths wider than long, the strongly arcuate sides sinuate just before the basal angles; stria entire; foveæ broadly, strongly and irregularly impressed, the carina very short, not attaining the angles; elytra two-fifths wider than the prothorax, much more than one-half longer than wide; striæ impressed and strongly punctate, obsolete near the tip; punctures strong, rather widely separated; scutellar series having four or five punctures. Length 5.5. New York (Willets Point, Long Island). The type has disappeared and I have not seen it since my then very small collection left my hands temporarily many years ago. **militare** Csy.

45—Color deep black, the upper surface with strong greenish lustre. Surface convex, as in *striola*, smooth and polished; head three-fourths as wide as the prothorax but distinctly narrower than an elytron, the eyes moderately prominent; antennæ long and slender, piceous, rufous basally, the medial joints rather more than three times as long as wide; prothorax two-fifths wider than long, the strongly and evenly rounded sides becoming rather abruptly straight and parallel in basal sixth or more, the angles right and sharp; base evidently narrower than the apex; surface broadly convex, punctulate at base, the transverse impressions distinct, the stria deeply impressed, not entire; foveæ rather large, nearly smooth, oval, very deep and adjoining the distinct carina; margins strongly reflexed basally, finely apically; elytra oblong, with feebly arcuate sides and gradually parabolic apex, more than one-half longer than wide, fully one-half wider than the prothorax; striæ rather coarse and impressed, obsolete at about apical sixth or seventh, the punctures strong, moderately separated; seventh row of very minute punctures distinct; foveæ near basal and apical third. Length (♂ ♀) 5.0–5.9 mm.; width 2.0–2.35 mm. California (Redwood Creek, Humboldt Co.). Seven specimens. . . . . **optatum** n. sp.

Color in great part piceous, with shining greenish gloss. 46

46—Body more abbreviated, moderately convex, the elytra castaneo-piceous; under surface piceo-rufous, the abdomen pale; head moderately large, very nearly as wide as an elytron; antennæ long, slender, colored as in *optatum*, the medial joints barely three times as long as wide; prothorax as in the preceding, except that the sides are more gradually sinuate near the base, becoming not quite parallel in about basal sixth, the surface nearly similar but not so punctured basally: elytra shorter, oblong-oval, with rather more arcuate sides, one-half longer than wide and one-half wider than the prothorax, the striæ shorter, disappearing near apical fourth, not quite so coarse or deep, the punctures nearly similar, the seventh series only evident toward base in the type; foveæ at two-fifths and before three-fourths. Length (♂) 4.8 mm.; width 1.8 mm. California (Mendocino Co.). **merens** n. sp.

Body more elongate, the head and pronotum blacker, with strong greenish gloss, the elytra deeper castaneous, with similar lustre, the under surface and legs similar; head less developed, very distinctly narrower than an elytron, the eyes similar, the sulci even broader and deeper; antennæ of like coloration, long, slender, the medial joints fully three times as long as wide; prothorax nearly as in *merens* but only a third wider than long, with feebler transverse impressions and with a few punctures basally, differing especially in having the sides more abruptly straight and perfectly parallel in basal sixth or seventh, the angles right and extremely sharp, almost prominent; elytra oblong-oval, having sensibly arcuate sides and gradually rounded apex, fully three-fifths longer than wide, two-thirds wider than the prothorax, the striæ and punctures throughout nearly as in *merens*, the foveæ at basal and apical third. Length (♂) 5.0 mm.; width 1.8 mm. Southern California, without further indication of locality..... **sedulum** n. sp.

47—Elytra with the posterior fascia reduced to an isolated lateral spot on each..... 48

Elytra with the bioblique fascia complete or suturally interrupted.... 51

48—Head relatively large, as wide as an elytron, sometimes apparently wider. Elytral striæ abbreviated near the apex; seventh stria with the punctures evident only toward the base; body long and slender, moderately convex, the elytra evidently wider posteriorly than at base, black, with strong steel-blue lustre, the elytra sometimes piceous or even paler and castaneous, the posterior spot small or moderate; legs pale rufous, the femora more or less blackish except distally; head but little narrower than the prothorax, the antennæ fuscous, pale basally, slender, nearly as long as the elytra, the medial joints three times as long as wide; prothorax just visibly wider than long, the strongly and evenly rounded sides abruptly becoming parallel and straight in basal fifth or sixth, the right angles very sharp; surface strongly convex, punctulate at base, the impressions more or less feeble, the foveæ large, deep, broadly sublinear, the carina short and fine; margins extremely finely reflexed; elytra three-fifths longer than wide, fully three-fourths wider than the prothorax; striæ somewhat coarse but feebly impressed, strongly,

not closely punctate, the striæ and punctures gradually obsolete before the tip; foveæ near two-fifths and two-thirds, rather coarse. Length (♂♀) 4.1–4.5 mm.; width 1.35–1.6 mm. Canada (three examples taken by the writer at Ottawa), New York (Lake Champlain), Wisconsin (Bayfield), and New Mexico (Las Vegas). [*Ochthedromus gelidus* Lec.]..... **scopulinum** Kirby

A—Similar to *scopulinum* but with the head relatively not so large, the prothorax notably larger and broader, being a fourth wider than long, the elytra paler castaneous, not so elongate, oblong, parallel, not inflated behind, with the striæ more coarsely punctate and entire, the row of punctures constituting the seventh stria entire and strongly marked throughout, the legs more slender and wholly testaceous, these characters applying strictly only to the female type from Las Vegas, New Mexico, and 4.5 by 1.7 mm. in dimensions. Three other specimens from " N. M." and from Sta. Fé Cañon, N. M., the latter taken by Prof. Snow, are more like typical *scopulinum*, but larger, slightly stouter and with relatively larger and broader prothorax and smaller head, the striæ similarly slightly abbreviated, the punctures of the seventh gradually fine and disappearing posteriorly, and the elytra longer, feebly inflated behind and less coarsely punctate, the legs pale testaceous throughout, as they are also in the Lake Superior examples; they are 4.2–4.3 by 1.65 mm. in dimensions. **bellulum** n. subsp.

Head relatively less developed, always distinctly narrower than an elytron.....49

49—Body small in size, rather depressed, with short transverse prothorax, which is apparently somewhat wider at base than at apex. Body deep black, with greenish lustre, the elytra not quite so black, the posterior pale spot clearly defined and feebly oblique; legs rufopiceous, the femora black, with paler tip; head four-fifths as wide as the prothorax, with prominent eyes; antennæ black, with piceous basal joint, three-fourths as long as the elytra, the medial joints not quite three times as long as wide; prothorax one-half wider than long, the well rounded sides gradually becoming parallel in nearly basal fifth, the angles right; surface with very feeble impressions and distinct subentire stria, the foveæ large, impressed, linearly deep at the bottom, the carina rather long and strong; elytra parallel, with but very feebly arcuate sides and rapidly rounded humeri, parabolic in apical third, not quite one-half longer than wide and about three-fifths wider than the prothorax; striæ not coarse, wholly unimpressed, gradually obsolescent near the apex, the punctures rather small but deep and moderately separated, the seventh stria a subentire series of extremely minute punctules; foveæ near two-fifths and two-thirds. Length (♀) 4.5 mm.; width 1.75 mm. California (Truckee). One specimen..... **satelles** n. sp.

Body much larger, more convex, the prothorax much narrower at base than at apex.....50

50—Form elongate, very convex, polished, black, with feeble greenish lustre, the elytra sometimes ænescent, the posterior pale spot small,

rounded and moderately well defined; legs pale, the femora often piceous, except at apex; head notably small, three-fifths as wide as the prothorax and much narrower than the thoracic apex, the eyes not very prominent; antennæ long, slender, piceous, paler basally, the medial joints between three and four times as long as wide; prothorax large and convex, two-fifths wider than long, the anteriorly strongly rounded sides oblique behind, becoming gradually sinuate and parallel very near the angles, which are right; anterior impression deep, near the apex, the posterior depression strong and punctate; stria deep, not quite entire; foveæ large, strongly impressed, the middle of each very deep; carina rather strong; margins strongly and subequally reflexed; elytra three-fifths longer than wide, only two-fifths wider than the prothorax, the sides feebly arcuate, not very abruptly rounded at the humeri, gradually strongly rounded in apical two-fifths; striæ moderate, more or less impressed, obsolete only very near the apex or subentire, the seventh subobsolete; punctures moderate, not very close-set; foveæ rather small, near basal and apical third. Length (♀) 6.2–6.3 mm.; width 2.3 mm. New Mexico..... **bimaculatum** Kirby

Form nearly as in *bimaculatum*, but with relatively larger head and smaller prothorax, shining, piceous-brown throughout, the anterior parts nearly black, with feeble greenish lustre; head fully three-fourths as wide as the prothorax and as wide as the thoracic apex, the eyes notably prominent; antennæ long and slender, fuscous, very gradually testaceous basally, the medial joints rather more than three times as long as wide; prothorax two-fifths wider than long, widest barely at all before the middle, the sides subevenly rounded, rather gradually sinuate posteriorly, becoming parallel near the right angles; surface punctate and depressed at base, the anterior impression fine, deep and close to the apex, which is almost truncate, with obtuse and blunt angles; stria strong, subentire; foveæ and carina nearly as in *bimaculatum;* elytra similar in general outline but broader, one-half wider than the prothorax, the striæ finer and less impressed, obsolescent on the declivity, the punctures somewhat smaller, moderately separated; foveæ before basal and near apical third; posterior pale spot similar. Length (♂♀) 5.7–6.8 mm.; width 2.15–2.4 mm. Nevada (Reno). Ten specimens.

renoanum n. sp.

51—Prothorax notably large and very convex, greatly constricted at base; eastern regions. Body rather stout, very convex, polished, black, with greenish lustre, the arms of the posterior fascia very much more oblique than in any other; abdomen rufous; legs brighter rufous; head very moderate, not two-thirds as wide as the prothorax but as wide as its apex, much narrower than an elytron, the eyes only moderately prominent; antennæ nearly as in the preceding, more rapidly testaceous basally; prothorax two-fifths wider than long, very strongly inflated and rounded at the sides, becoming parallel rather abruptly in basal sixth or seventh; base depressed and punctate, the stria fine; foveæ very deep, linear, the carina shorter, distinct; elytra nearly three-fifths longer than wide, two-

fifths wider than the prothorax, gradually ogival behind, the striæ coarse and deeply impressed, rapidly obsolete near apical fifth, the seventh obsolete; sixth stria barely extending to the middle; punctures coarse and deep, rather close; foveæ before basal and behind apical third, the anterior almost confounded with the strial punctures. Length (♂♀) 6.2–7.0 mm.; width 2.35–2.6 mm. Pennsylvania and Illinois.....**postremum** Say

Prothorax relatively smaller, not so convex or inflated and less strongly narrowed at base; size much smaller; western regions.....52

52—Thoracic base subequal in width to the apex. Body oblong, very moderately convex, polished, black, with slight metallic lustre, the elytra obscure castaneous, the posterior bioblique fascia rather nubilous; under surface black, the legs pale; head four-fifths as wide as the prothorax and almost as wide as an elytron; antennæ blackish, the basal joint pale, the medial joints slightly obconic, nearly three times as long as wide; prothorax three-sevenths wider than long, the sides evenly and rather strongly rounded, rapidly becoming parallel in about basal fifth, the angles right; surface smooth, feebly depressed and slightly rugose at base, the anterior angulate impression fine and shallow; stria fine, subentire; foveæ rather large and rounded, very deeply impressed, the carina nearly as long as the fovea and distinct; elytra three-fifths longer than wide and about one-half wider than the prothorax, gradually parabolic behind, the sides feebly arcuate, rapidly rounding at the humeri; striæ moderate, only feebly impressed, disappearing very near the apex or subentire, the seventh wanting; punctures distinct basally, gradually fine behind, obsolete near apical third; foveæ near basal and apical third. Length (♂♀) 4.6–5.0 mm.; width 1.75–2.0 mm. British Columbia (Victoria),—Wickham.....**vancouveri** n. sp.

Thoracic base more or less evidently narrower than the apex.....53

53—Seventh stria wholly wanting.....54

Seventh stria visible as a row of more or less minute punctures.....55

54—Body stouter, rather convex, polished black, with feeble metallic lustre, the posterior pale fascia distinct, though more or less nubilously defined; under surface black, the legs bright rufous; head well developed, with prominent eyes, usually over four-fifths as wide as the prothorax and very nearly as wide as an elytron; sulci rather distant from the eyes; antennæ not very slender, blackish, with rufous basal joint, two-thirds as long as the elytra, the medial joints between two and three times as long as wide; prothorax two-fifths to nearly one-half wider than long, the strongly rounded sides becoming rather abruptly parallel in basal sixth to fifth, the angles right; surface smooth, not punctured at base, with more or less feeble impressions and fine incomplete stria; foveæ very deep, linearly impressed, sometimes punctulate, longer than the carina, which is distinct; elytra scarcely more than one-half longer than wide, about one-half wider than the prothorax, parallel, with broadly arcuate sides, the striæ gradually disappearing near the apex, only feebly impressed, the punctures distinct though not very coarse, the foveæ near basal and behind apical third. Length (♂♀) 5.0–5.8

mm.; width 1.8–2.25 mm. California (San Diego—the type locality —and coast regions north of San Francisco), also Oregon (Corvallis). Sixteen examples..... **striola** Lec.

Body narrower and more depressed, similarly black, with testaceous legs, but with the elytra not black but uniform castaneous, the posterior fascia nubilously paler; head rather well developed though with less prominent eyes, four-fifths as wide as the prothorax but more evidently narrower than an elytron; antennæ nearly similar but more slender; prothorax smaller, nearly one-half wider than long, the evenly rounded sides abruptly straight and parallel in nearly basal fifth, the angles right; surface as in *striola* but less convex and with the side margins more finely reflexed; elytra parallel, narrower, three-fifths longer than wide, fully one-half wider than the prothorax, the striæ as in *striola* but with the punctures smaller and more close-set, the foveæ near basal and apical third. Length (♂♀) 4.7–5.6 mm.; width 1.8–2.0 mm. California (Dunsmuir, Siskiyou Co.—Wickham; also near Mt. Diablo). Six examples.

shastanicum n. sp.

55—Form oblong-suboval, rather convex, shining, black, the posterior fascia but slightly bioblique and more or less interrupted at the suture; elytra sometimes dark castaneous; under surface black, the legs dark rufous, the femora blackish with pale tip; head moderate, distinctly narrower than an elytron; antennæ slender, three-fourths as long as the elytra, blackish, pale at base, the medial joints not quite three times as long as wide; prothorax two-fifths to one-half wider than long, in general outline as in the preceding species; surface depressed and punctulate at base, the anterior impression distinct; foveæ very deep, sublinear, usually more abrupt externally than internally, the carina distinct and strongly elevated; elytra one-half longer than wide, two-fifths to one-half wider than the prothorax, the striæ moderate, not much impressed, gradually disappearing near the apex, the punctures not very coarse and well separated, closer in the two sutural series; foveæ near basal third and apical fourth. Length (♂♀) 4.5–5.3 mm.; width 1.75–1.9 mm. New Mexico, Colorado (Boulder Co.), Utah (southwestern) and Arizona (Tucson and other parts). Twelve specimens.

consanguineum Hayw.

Form more elongate, moderately convex, piceous-black, shining, the elytra pale flavo-testaceous in the type, with the bioblique posterior fascia broadly interrupted at the suture and rendered more evident by a darker shading bordering it anteriorly; under surface pale piceous, the legs testaceous; head rather small, much narrower than an elytron, the antennæ slender, in great part pale; prothorax two-fifths wider than long, the sides inflated and strongly arcuate, rather abruptly straight and parallel in nearly basal sixth, the angles right; surface barely at all depressed medially at base, the anterior impression moderate, the stria only visible between the impressions; foveæ deeply impressed, sublinear at the bottom, the carina distinct; side margins more broadly reflexed than in any other of this section; elytra more elongate, nearly two-thirds longer than wide, parallel,

with broadly arcuate sides, rather gradually rounded at the humeri, fully two-fifths wider than the prothorax; striæ somewhat fine and not evidently impressed, gradually disappearing near the tip, the punctures not coarse or very deep; foveæ near three and five sevenths. Length (♂) 5.2 mm.; width 1.85 mm. Colorado. Levette collection. A single example..... **lepusculus** n. sp.

56—Antennæ not so long, not over twice as long as the thoracic width, the medial joints distinctly less than three times as long as wide. Body of smaller size, but unusually diversified in this respect, colored as in *tetracolum* and *ustulatum*, except that the head and pronotum are dark piceous and not black; head moderate, very much narrower than an elytron, the antennæ testaceous throughout; prothorax a third to two-fifths wider than long, widest barely before the middle, the evenly and strongly rounded sides becoming rather gradually parallel in basal fifth or sixth, the base slightly depressed and feebly punctulate, the foveæ large, deep, sublinear, the carina distinct; elytra shorter than in the others of this subsection, one-half longer than wide, parallel, with rather distinctly arcuate sides, about one-half wider than the prothorax, the striæ feebly impressed, gradually evanescent on the declivity, the punctures moderate in size and separation, the seventh stria a distinct series of fine and more remote punctures; foveæ near basal and behind apical third. Length (♂ ♀) 3.8–5.6 mm.; width 1.4–1.9 mm. Illinois (Highland Park), Colorado (Boulder Co.), Wyoming (Cheyenne), Utah, Nevada (Reno) and New Mexico. Abundant. Thirty-seven specimens. **lucidum** Lec.

Antennæ longer, with the medial joints fully three times as long as wide, usually more than twice as long as the thoracic width; body larger in average size..... 57

57—Prothorax smaller, the elytra longer than in the allied species, with subentire striæ. Elongate and only moderately convex, shining as usual, black or feebly picescent, with greenish lustre anteriorly, the pale castaneous elytra marked near the humeri and posteriorly as in *tetracolum;* legs rufous; head four-fifths as wide as the prothorax, with prominent eyes, slightly narrower than an elytron; prothorax two-fifths wider than long, widest and with the sides subprominently rounded just before the middle, the sides rather abruptly parallel in basal sixth, the angles right; base but slightly narrower than the apex; surface nearly as in *lucidum*, the base but feebly depressed, the lineate deeper part of the foveæ more oblique; elytra fully three-fifths longer than wide, parallel, with feebly arcuate sides, rather gradually rounding at the humeri, very gradually parabolic behind, three-fourths wider than the prothorax; striæ rather fine and very feebly impressed, subentire, the punctures small and somewhat close-set; seventh series only distinct in basal half; foveæ at two-fifths and two-thirds. Length (♂ ♀) 5.2–5.5 mm.; width 1.95 mm. New Mexico (Las Vegas). Three examples..... **castalium** n. sp.

Prothorax larger, the elytra broader, with the striæ obsolescent near the apex..... 58

58—Body oblong, moderately convex, shining, black, the anterior parts

with decided greenish lustre, the elytra castaneous, nubilously paler toward the humeri and in a bioblique posterior fascia; under surface black, the legs rufous, the femora rarely in part more obscure; head moderate, the antennæ long and slender, fuscous, gradually testaceous basally; prothorax nearly as in *lucidum*, a third to two-fifths wider than long, the anterior impression rather strong, the posterior obsolescent medially; surface rather convex, the moderate stria generally attaining the base but not the apex; foveæ large, very deep, broadly impressed, with the bottom elongate-linear, the carina almost equally long, fine but distinct; elytra oblong, parallel, with but very feebly arcuate sides, rapidly rounding at the humeri, rather obtusely circularly rounded at apex, not quite three-fifths longer than wide, about one-half wider than the prothorax, the striæ rather fine, not impressed, finely and somewhat closely punctate, the foveæ at three-sevenths and near two-thirds. Length (♂♀) 4.8–5.5 mm.; width 1.8–2.0 mm. Nevada (Reno).....**nevadense** Ulke

Body oblong-oval, similar in coloration, the legs pale testaceous; head and antennæ nearly similar; prothorax somewhat shorter but otherwise as in *nevadense* and *lucidum;* elytra differing from those of *nevadense* in their more oval form, the sides being distinctly arcuate, less rapidly rounded at the humeri and with the apex more gradually ogivally rounded, the lateral margins more broadly and strongly reflexed; striæ more impressed suturad but otherwise similar; foveæ differing in position as a rule, being near basal and apical third. Length (♂♀) 4.8–5.7 mm.; width 1.8–2.2 mm. California (coast regions from Sta. Cruz to Humboldt).....**subinflatum** Mots.

Body nearly as in the European *ustulatum*, oblong-oval, rather convex, shining, black, with feeble viridi-æneous lustre anteriorly, the elytra nearly black, with a large nubilous oblong pale area at the sides basally and a pale bioblique subapical fascia, generally widely interrupted at the suture; under surface piceous-black, the legs pale rufous; head moderate, slightly narrower than an elytron; antennæ long, slender, piceous, testaceous basally; prothorax a third wider than long, much narrower at base than at apex, the strongly rounded sides abruptly straight and parallel in basal fifth or sixth, the angles right; apex only very feebly sinuate; surface convex, the anterior impression distinct and punctulate; base punctate, the impression obsolete medially; stria sometimes subentire; foveæ broadly impressed, deep and linear at the bottom, the carina short and feeble; elytra more than one-half longer than wide, one-half wider than the prothorax, parallel, with distinctly arcuate sides, somewhat gradually rounding at the humeri and very gradually ogival at apex; sides distinctly arcuate; striæ not fine, noticeably impressed, very fine and obsolescent at apex; punctures strong, deep and close-set, disappearing near posterior third; seventh stria a series of minute and rather close punctures, obsolescent behind the middle; foveæ near basal and apical third. Length (♂♀) 4.5–5.5 mm.; width 1.75–2.05 mm. New York (Long Island) and Indiana.

tetracolum Say

A—Similar to the preceding but with the thoracic base barely evi-

dently narrower than the apex, the elytra broader, with the parallel sides straighter, the apex more obtusely rounded and the striæ and punctures less coarse, the former somewhat less impressed. Length (♀) 5.6 mm.; width 2.2 mm. Minnesota (Duluth). A single example taken by the writer. . . . . **rupicola** Kirby

B—Similar to *tetracolum* but broader, the prothorax broader, with the apex but little wider than the base, the sides more strongly rounded, more oblique posteriorly and parallel for a shorter distance before the hind angles; elytra castaneous, with the pale areas of *tetracolum* relatively paler and not nubilously but very sharply defined, the posterior fascia crossing the suture, the parallel sides much less arcuate and more rapidly rounded at the humeri. Length (♀) 5.2 mm.; width 2.1 mm. New York (lower Hudson Valley). . . . . **nactum** n. subsp.

59—General habitus and striation of the elytra nearly as in the preceding section, the striæ gradually obsolescent or very feeble at the apex. . 60

General habitus differing somewhat, due to the broader body and the elytral striæ being deep and very conspicuous to the extreme elytral apex. 61

60—Body narrow, distinctly depressed, shining, black, with greenish lustre, the elytra uniform pale castaneous, darker and greenish at tip; under surface black, the legs rufous; head well developed, with prominent eyes, about as wide as an elytron, fully four-fifths as wide as the prothorax; antennæ rather short, only two-thirds as long as the elytra, piceous-black, with rufous basal joint, the medial joints between two and three times as long as wide; prothorax one-half wider than long, the base barely visibly narrower than the apex; sides well rounded before the middle, straighter apically, oblique and broadly sinuate behind, becoming parallel at the angles, which are right and very sharp; surface with moderate impressions, the stria extending only between them, the foveæ shallow, rugulose, obliquely sublinear, the carina obsolete; elytra parallel, with nearly straight sides and rapidly rounded humeri, three-fifths longer than wide and one-half wider than the prothorax, the apex circularly rounded; striæ moderately coarse, distinctly impressed, all entire, though very fine and feeble at apex; punctures not coarse but close-set; foveæ rather small, just before the middle and behind apical third. Length (♀) 5.0 mm.; width 1.75 mm. Massachusetts. The specimen described is marked "type" but is probably a cotype. [*Bemb. blanchardi* Hayw.]. . . . . **rufotinctum** Chd.

Body notably broad, more convex, shining, black, with æneo-cuprous lustre throughout above, black beneath, the legs obscure rufous, the femora nearly black; head moderate, nearly four-fifths as wide as the prothorax, very much narrower than an elytron; antennæ long and slender, three-fourths as long as the elytra, black, the basal joint rufous, with a blackish streak above, the medial joints rather more than three times as long as wide; prothorax one-half wider than long, the sides well rounded just before the middle, oblique and straighter anteriorly, oblique posteriorly, becoming gradually deeply sinuate just before the angles, which are very sharp, acute

and prominent; surface with very feeble impressions and biabbreviated stria, the foveæ rather small, rugose, deeply impressed and sublinear, the carina obsolete; elytra one-half longer than wide, two-thirds wider than the prothorax, parallel, the sides scarcely arcuate, rapidly rounded at the broadly exposed humeri, broadly obtusely rounded at tip; striæ as in the preceding, feebly impressed, distinctly but not very coarsely punctate, the foveæ small, near basal and apical third, the posterior fovea wanting in one specimen. Length (♂ ♀) 5.6–5.8 mm.; width 2.3–2.4 mm. Pennsylvania, New York and Indiana..... **dilatatum** Lec.

61—Elytral striæ feebly impressed and finely punctate, the dorsal foveæ well developed and broadly impressed as a rule. Body broadly oblong, black throughout, with rather bright subcupreous lustre above, the anterior parts somewhat less shining, the legs piceous-black; head with prominent eyes, four-fifths as wide as the prothorax but not as wide as an elytron; antennæ long and slender, the medial joints between three and four times as long as wide, black, the basal joint rufous beneath, blackish above; prothorax two-fifths to one-half wider than long, about as wide at base as at apex, widest barely before the middle, the sides not narrowly but very feebly reflexed, rounded submedially, straight anteriad, equally oblique and very feebly sinuate posteriad, the basal angles minutely prominent and acute; surface with slight wavy rugulations, the impressions feeble, the stria fine and incomplete; foveæ large, rugulose, extremely shallow, the carina wanting; elytra parallel, with feebly arcuate sides, more than one-half longer than wide, one-half wider than the prothorax, the small punctures rather close-set, the foveæ near three-sevenths and three-fourths. Length (♂ ♀) 5.7–6.4 mm.; width 2.25–2.35 mm. Pennsylvania (Fairview), New Jersey and Wisconsin. [*Bemb. antiquum* Dej.]..... **honestum** Say

Elytral striæ well impressed and conspicuously punctured, the dorsal foveæ notably small.....62

62—Form moderately broad, rather more convex and more polished, smaller in size, black, with æneous lustre above, the legs blackish-piceous, the femora paler basally; head with unusually large prominent eyes, five-sixths as wide as the prothorax but distinctly narrower than an elytron, the sulci deep and parallel as in related species; antennæ colored as in *honestum* but slightly shorter and less slender, the medial joints about three times as long as wide; palpi similarly blackish; prothorax relatively small, two-fifths wider than long, much narrower at base than at apex; sides more narrowly and strongly reflexed, more evenly and strongly arcuate anteriorly, more oblique basally, becoming gradually deeply sinuate just before the sharply prominent angles; surface more convex, smooth, with obsolescent impressions and very fine stria, the foveæ small but deep, elongate and linear, the carina wanting; elytra parallel, with feebly arcuate sides, one-half longer than wide and nearly three-fifths wider than the prothorax, subcircularly rounded at tip; striæ deep at apex, the strong close-set punctures evident almost to the tip;

foveæ near two-fifths and three-fourths. Length (♂♀) 4.7–5.4 mm.; width 1.8–2.1 mm. Indiana and Iowa. Abundant.
chalceum Dej.

Form rather broader; size larger, nearly as polished, black, the anterior parts with greenish lustre, the elytra æneous; head nearly similar, the eyes not quite so large; antennæ longer and more slender, similarly colored, the medial joints more than three times as long as wide; prothorax two-fifths to one-half wider than long, in outline nearly as in *chalceum* but less convex, with less strongly rounded sides and deeper transverse impressions, broader at base, the latter not very obviously narrower than the apex; foveæ linear, longer and more oblique, the carina wanting; sides well reflexed, becoming extremely finely so at apex; elytra rather more than one-half longer than wide, three-fifths wider than the prothorax, parallel, with feebly arcuate sides, not quite so rapidly rounding at base as in *chalceum*, the apex more gradually obtusely ogival; impressed striæ still conspicuous at apex; the strong and close-set punctures are, however, obsolete at about apical third or fourth; foveæ similar. Length (♂♀) 5.7–6.0 mm.; width 2.1–2.35 mm. Texas. Two examples. . . . . **integrum** n. sp.

63—Elytra very gradually ogival behind in almost apical half. Body larger in size, moderately convex, shining, piceous-black, with greenish lustre anteriorly, the elytra very pale and uniform testaceous, with a triangular fuscous area at base; under surface nearly black, the legs rufous; head rather large, four-fifths as wide as the prothorax and as wide as an elytron, the eyes moderately prominent; antennæ long and slender, testaceous, the medial joints three times as long as wide; prothorax relatively large, two-fifths wider than long, much narrower at base than at apex, the sides subevenly and strongly rounded, rather abruptly straight and subparallel in about basal sixth, the angles right; surface depressed at base, the anterior impression distinct, the stria fine, not entire; foveæ rather small, deep, oval, the carina distinct; margins very finely reflexed; elytra slightly more than one-half longer than wide, only two-fifths wider than the prothorax, wider behind the middle than at base, the humeri rapidly rounding; striæ very fine, entire, barely at all impressed, the punctures very fine and rather widely separated; foveæ small, near two and four fifths. Length (♂) 5.2 mm.; width 1.9 mm. New Mexico (somewhere between Fort Wingate and Jemez Springs),—Woodgate. . . . . **sejunctum** n. sp.

Elytra more rapidly rounding behind, parallel; body much smaller in size. 64

64—Sides of the prothorax rather abruptly straight and parallel in about basal sixth. 65

Sides gradually though distinctly sinuate basally, becoming parallel only at the angles. 66

65—Form moderately slender, rather more convex, shining, black, the anterior parts with greenish lustre, the elytra testaceous, with the apical margin slightly clouded and with a common fuscous spot just behind the middle, the spot laterally prolonged and attenuated; legs

rufous, the femora often piceous with pale tip; head not large and with the eyes only moderately prominent, three-fourths as wide as the prothorax and distinctly narrower than an elytron; antennæ fuscous, gradually paler basally, the medial joints scarcely three times as long as wide, slightly obconic; prothorax not one-half wider than long, much narrower at base than at apex, the sides strongly rounded anteriorly, more oblique and less rounded behind the middle, moderately reflexed; anterior impression fine and distinct, the base moderately depressed, the stria very fine between them; foveæ rather large, regular, broadly sublinear, the carina distinct; elytra rather shorter, barely one-half longer than wide, parallel, with feebly arcuate sides and rapidly rounding humeri; striæ fine and feeble, obliterated somewhat before the tip; punctures fine, somewhat close; foveæ near three-sevenths and four-fifths. Length (♂♀) 4.2–4.6 mm.; width 1.4–1.55 mm. Wyoming (Cheyenne),—Wickham. Four examples..... **caducum** n. sp.

Form notably slender and more depressed, shining, nearly similar in coloration throughout, the apex of the elytra scarcely at all infumate, the central cloud subsimilar; head subsimilar but fully as wide as an elytron, the antennæ nearly similar, prothorax similar but narrower and with the sides more evenly arcuate from apex to the parallel basal part, the obliquity posteriorly being nearly as arcuate as the anterior part of the sides; elytra differing very much in form, more elongate, three-fifths longer than wide, nearly one-half wider than the prothorax, parallel, with the sides distinctly arcuate and much less rapidly rounding at the humeri, the apex less obtusely rounded; striæ fine, feebly impressed and entire, distinct at apex, the punctures fine but more distinct, moderately close; foveæ similar. Length (♀) 4.2 mm.; width 1.35 mm. Colorado (Montrose—elev. 6000 ft.)..... **albidipenne** n. sp.

66—Body moderately slender, somewhat convex, shining, the coloration as in the preceding, except that the subcentral cloud on the elytra is very small, nubilous and without lateral extension, the apical margin darker though apparently by diaphaneity, the abdomen dark beneath the tip; head and pronotum pale brown in somewhat immature specimens, the former well developed, with notably prominent eyes, nearly four-fifths as wide as the prothorax and as wide as an elytron; antennæ slender, pale, the medial joints fully three times as long as wide; prothorax as in *albidipenne*, excepting the posterior portions, which are as described; hind angles right and very sharp; elytra parallel, with only very feebly arcuate sides, very rapidly rounded at the humeri, somewhat more than one-half longer than wide and fully one-half wider than the prothorax, gradually subevenly rounded in apical third; striæ fine, feebly impressed, entire, the fine punctures sometimes visible to the tip; foveæ small, at two and four fifths. Length (♂) 4.0–4.3 mm.; width 1.45–1.5 mm. Utah (Little Salt Lake, Parowan),—Wickham. Four specimens. **parowanum** n. sp.

Body distinctly narrower, similar in color, except that the submedian cloud on the elytra is larger and tenuously prolonged at its sides, as

in *caducum;* head and prothorax nearly as in the preceding, except that the latter is a little shorter, nearly one-half wider than long, with the basal angles, though sharply defined, evidently more than right; elytra nearly similar but only two-fifths wider than the prothorax and with the side margins less broadly reflexed. Length (♂) 3.75 mm.; width 1.3 mm. A single specimen from the Levette collection, apparently from Colorado. . . . . **petulans** n. sp.

67—Elongate, subparallel, very depressed, as much so as in any of the *planatum* group, shining, piceous-black, the elytra testaceous, blackish toward tip; under surface piceous, the abdomen rufous, with the segmental apices blackish; head large, with broad and deep sulci and moderately prominent eyes, five-sixths as wide as the prothorax and distinctly wider than an elytron; antennæ fuscous, paler basally, as long as the elytra, the medial joints three times as long as wide; prothorax virtually flat, with broadly reflexed side margins, distinctly narrower at base than at apex, two-fifths wider than long, the sides somewhat prominently rounded just before the middle, thence feebly arcuate to the rounded apical angles, oblique posteriorly, becoming subparallel in more than basal sixth, the angles nearly right, sharp; surface with wave-like rugulosity toward the fine incomplete stria, the impressions moderate; foveæ large, rugose and very shallow, the carina not evident; elytra three-fifths longer than wide, two-fifths wider than the prothorax, parallel, the sides very rapidly rounding at the humeri; striæ coarsely and deeply impressed, entire, the punctures fine and especially very feeble; seventh stria obsolete; foveæ near two-fifths and three-fourths. Length (♀) 5.2 mm.; width 1.75 mm. New York (Ithaca). One example.

grandiceps Hayw.

My representatives of *quadrulum* are so much smaller than LeConte's type, "from east of Fort Colville"—5 mm.—that I am by no means certain that they properly belong to that species. It is evident that there are a number of specific modifications of the *quadrulum* type of *Peryphus* in the northwestern regions, of which two are here described. *Umbraticola* resembles the New Mexican *recticolle*, but has the elytral punctures as remote as in *quadrulum*. The original description of *recticolle* is given above, as I have no authentic example at hand.

As a probable abnormality, the complete absence of the anterior dorsal foveæ in the male type of *callidum* is to be noted; the usual two are present in the female. In one of my specimens of *dilatatum* Lec., it is the posterior fovea that is similarly wanting. A case will be noted further on, under *Notaphus*, where the middle of the three foveæ in *consimile* Hayw., is completely obsolete, and there is another instance before me under *Isotachys omissus*, where the anterior

fovea is missing. These instances of missing dorsal foveæ are, however, rather rare.

The species described above under the name *vulsum*, is probably allied to *planum* Hald. (*guexi* Chd.), but has the sixth elytral stria, not evident basally and obliterated posteriorly as intimated of that species, but having the form of a very fine subobsolete line, entire and equal throughout, and the elytra are not black but pale castaneous. *Planum* Hald. (1843), is not preoccupied by *planum* Schil. (1846), as represented by Chaudoir and repeated by Hayward. *Champlaini* is probably allied to *fugax* Lec., described as from Illinois, but differs in being as convex as *tetracolum* Say, and its degree of depression could not be compared in any way with that of *planatum*, as stated by LeConte of *fugax*. In the latter species, also, the seventh stria is said to be obliterated behind the middle; in *champlaini* it is wholly wanting. *Planipenne* Lec., from Lake Superior, is said to be a synonym of *fugax* by Hayward, but as the sixth and seventh striæ are obliterated, it must be much more closely related to *vulsum* or to *planum* Hald.; both *planipenne* and *planum* differ from *vulsum* rather conspicuously in coloration, so far as can be decided by my very limited material.

Bembidium lugubre of LeConte, together with the two subspecies defined in the table, might all be regarded as varieties and subspecies of the Mexican *mexicanum* Dej., a type pervading nearly all the Sonoran faunas of North America; *sallei* Bates is, however, a distinct species, in no way very closely allied to *mexicanum*, and in fact Mr. Bates confused many species and valid subspecies under his conception of *mexicanum*, with little or no attempt at legitimate discrimination. *Pernotum* is widely distinct from *sallei* in size and form of the prothorax, in strial punctuation and in many other features, being one of the more isolated species of this section of the subgenus. All the forms above described as allied to *transversale*, united without color of propriety by Mr. Hayward, are valid species, as shown by often extended series in my collection. *Ochthedromus compar* Lec., of this section is simply the catalogue name of a supposed variety of *transversale;* nothing further can be said concerning it at present.

The species described by Hayward as *brevistriatum* might seem to belong properly to the *nigrum* section, and not widely separated

therefrom as above suggested, for it resembles *nigrum* in general habitus, size and more especially in having the eighth stria remote from the margin; but the subgenus cannot be divided consistently as above by the conspicuous differences in form of the prothorax, without taking this course, and after all, although the eighth stria is similarly situated in both, it has its own peculiarity in each case, being groove-like and moderately punctate in *nigrum*, and feebly and only partially impressed but with relatively gigantic punctures in *brevistriatum*. *Nigrum* is joined very naturally to the succeeding large species of the *transversale* type, though the *quadrulum* and *concolor* sections of small black species, and, correspondingly, *brevistriatum* is united in equally gradual succession with the larger species of the *postremum* type, having cordate prothorax, through the *californicum* section of small black polished species, which present corresponding conditions, as a link, that the *concolor* section does in the case of *nigrum* and the large species with non-cordate prothorax.

The form above noted under the name *nitens*—which is apparently undescribed hitherto, the only references to it which can be found being in lists and catalogues—was placed as a synonym of the European *grapei* by Hayward, but as there are several well defined species and subspecies of the section to which it belongs, scattered through North America east of the Rocky Mountains, but none at all on the Pacific slope, where boreal Eurasiatic species are especially to be looked for, I am of the opinion that it is not the same as *grapei* and therefore have described it under the name assigned by LeConte.

The above species described as *histricum* is one of those confounded with the more northern *picipes* Kirby, by Hayward, as is also *militare* Csy.—the type of which disappeared many years ago from my collection; both the latter have bright rufous legs, however, and could not have been appropriately named *picipes*, even with a slight shading of the femora, which may be granted as sometimes occurring. I find that in the species of that subsection having bicolored legs, there is no decided departure from this coloration, except that due to evident immaturity, as seen in a good series of the Californian *optatum* in my collection and, on the other hand, in those species normally having wholly rufous legs, there is but

rarely any suspicion of darker femora, this being shown very well by a correspondingly complete series of *texanum* before me. It is rather beyond doubt that *picipes* is a species related to *optatum*, *platynoides* and *merens*, rather than to *texanum*, *histricum* and *militare*. If the elytra in *militare* are really in any way alutaceous, as stated in my original description, this would proclaim it as a very isolated species in the subgenus *Peryphus*, and I fear therefore that the description may be faulty in this respect.

The species *optatum*, *merens* and *sedulum*, described above, belong to the *platynoides* subsection, but *platynoides* Hayw., is a larger and flatter species, the types of which were found near the source of the Kern River in southern California; *optatum*, which seems to approach it more closely than any other of the three, is fully as convex as *striola*, and in fact has the normal convexity of the entire *tetracolum* or *ustulatum* section.

The varietal forms of *scopulinum*, near its southern limits in New Mexico, are very puzzling and would require large series for proper study; it is a peculiarly northern type, as is also *bimaculatum* Kirby. My two specimens of the latter, from New Mexico, may not be perfectly typical, though fitting the description of Hayward, who probably had typical specimens before him, and especially in the very small head. *Renoanum* is certainly a different though related species, differing in color, in the larger head and much more prominent eyes. *Sordidum* Kirby, said to be identical with *bimaculatum* by Mr. Hayward, I do not know.

The Mexican species described under the name *submaculatum* by Bates (Biol. C.-A, I, i, p. 149) is apparently very closely allied to *consanguineum* Hayw., and the two may be identical; *vernale* Bates (l. c.), however, also seems closely allied. *Lucidum* (l. c.), is given by Mr. Bates as a new species, the reference to LeConte's description having been inadvertently omitted.

For much the same reason that led me to adopt the name *nitens* above, instead of *grapei*, I would recommend the adoption of Say's name *tetracolum*, instead of *ustulatum*, although retaining the latter as a group name. The fact that besides *tetracolum* we have a number of closely related though distinct taxonomic modifications, shows that the *tetracolum* type has been very long established in America, and the probabilities therefore are that no one of our re-

lated forms is exactly the same as *ustulatum*. Comparisons of American with European species have been made too hastily in many instances, of which I believe the present to be one, as well as in the cases of *nitens* and *frontale* Lec.—not *assimile*.

The *sejunctum* section, as defined above, comprises forms that were described by Mr. Hayward under the name *fuscicrus* Mots. —not properly *fuscicrum* as written. The name *fuscicrus* was substituted by Motschulsky for the Alaskan species identified as *lucidum* Lec., by Mannerheim. This occurs on the seashore of the Kenai Peninsula, while *lucidum* inhabits no such environment, being confined to the inland parts of the continent, and is therefore in all probability quite distinct from *lucidum* Mann. nec Lec.; *lucidum* Lec., it may be stated, never has fuscous legs. The name *fuscicrus* was given by Motschulsky to this Kenai species, and not at all to the "Variety b" of Mannerheim, which is a different species and allied to the species from *caducum* to *petulans* above. The only allusion by Motschulsky is "*Peryphus lucidus* Mann. non LeConte = *P. fuscicrus* Mots." How the name *fuscicrus* could have become limited to the "Variety b" of Mannerheim I do not know, but it is so given in the Munich Catalogue, the *lucidum* Lec., of Mannerheim, being there regarded as a correct identification. It is plain, therefore, that "Variety b" of Mannerheim is still without a name. It is not likely to be identical with any one of the above species from *caducum* to *petulans*, all of which, it may be said, are amply distinct among themselves, the only one of which there may be any doubt being *petulans;* this may possibly prove to be a subspecies of *parowanum*, although not probably.

Group X—*ephippigerum*

Subgenus **Peryphodes** nov.

The chief characters distinguishing this small subgenus from *Peryphus*, are the narrow subcylindric form of the body and the short, rather thick antennæ; our two species are as follows:

Form elongate, parallel and convex, polished throughout, deep black, with feeble greenish lustre, the elytra dark testaceous, with a transversely oval flavous ring, including a darker sutural spot near apical fourth, the anterior part of the ring accentuated by blackish shading; there is also a small scutellar darker spot; under surface piceous, the

legs dark rufous; head three-fourths as wide as the prothorax and wider than an elytron; antennæ short and thick, but little longer than the head and prothorax, dark testaceous in color, the medial joints somewhat obconic, much less than twice as long as wide; prothorax large, two-fifths wider than long, somewhat wider at base than at apex, the sides rather feebly, subevenly rounded, becoming oblique and broadly sinuate toward the sharp basal angles, which are rather more than right, the sides of the base very oblique; margins moderately reflexed; anterior impression subobsolete; base somewhat depressed and punctulate; stria very fine and subentire; foveæ small, rather deep and linear, the carina distinct; elytra two-thirds longer than wide, only about a fourth wider than the prothorax, parallel, the sides very gradually rounding toward the humeri; striæ rather fine, very feebly impressed, the punctures small, widely separated except near the suture, the foveæ near basal third and apical fourth or fifth; seventh series as distinct as the sixth. Length (♂ ♀) 3.8–4.0 mm.; width 1.2–1.3 mm. California (San Diego). Three examples, taken by the writer on the shores of the bay. . . . . **ephippigerum** Lec.

Form much more abbreviated, convex, shining, black, generally with piceous tinge, the elytra flavate, with a small scutellar cloud, a transverse biarcuate clouded fascia at the middle and a bioblique cloud between this and the apex, the small anterior fovea also blackish; entire under surface dark rufous to black, the legs always rufous; head much smaller, scarcely as wide as an elytron and two-thirds as wide as the prothorax, the eyes not quite so large or prominent; antennæ testaceous throughout, longer and less stout than in the preceding, the medial joints about twice as long as wide; prothorax shorter, nearly one-half wider than long, otherwise almost as in the preceding, except that the oblique sides posteriorly are not distinctly sinuate, being very broadly and just visibly so, with the very sharp angles rather more than right; elytra about one-half longer than wide, a fourth to nearly a third wider than the prothorax, parallel, the sides very gradually rounding toward the humeri, ogival in apical third; striæ fine, subentire, only impressed suturad and there rather faintly, the punctures fine, less separated than in the preceding, the seventh stria and foveæ almost similar. Length (♂ ♀) 3.4–3.8 mm.; width 1.18–1.28 mm. Utah (Little Salt Lake, Parowan and Provo),—Wickham. Eight specimens. . . . . **salinarium** n. sp.

In *salinarium* the elytra are frequently clouded with obscure tint throughout, the peculiar markings then being indistinct, and in one specimen they are nearly black, each with a long nubilous rufous external spot toward the humeri. This species may have been confounded with *ephippigerum* by Mr. Hayward, but it is obviously distinct in its much more abbreviated form, smaller head, less thickened and somewhat longer antennæ and in the character of the elytral ornamentation.

Group XI—*semistriatum*

Subgenus **Hydriomicrus** nov.

The two known species of this group do not resemble each other very closely in general habitus, but both possess a very remarkable character in having a series of small setigerous punctures along the middle of each of the strial intervals. The mentum tooth is rather sharply triangular in both species, which are typical of two distinct sections of the subgenus; they may be defined as follows:

Body ventricose, strongly convex, polished, black, the elytra indefinitely piceo-rufous apically; under surface black, the legs rufous; head moderate, three-fourths as wide as the prothorax and much narrower than an elytron, the sulci broad and deep, the large eyes moderately prominent; antennæ long, slender, blackish, pallid basally, longer than the elytra, with the medial joints nearly three times as long as wide; prothorax barely a third wider than long, the sides inflated and strongly rounded, abruptly sinuate near the base and thence straight and somewhat diverging in nearly basal fifth to the right and sharp angles; surface convex, smooth, the anterior impression obsolete, the base depressed; stria deep, almost entire; foveæ smooth, deep, oval, adjoining the rather long fine carina; margins rather narrowly reflexed; elytra oblong, two-fifths longer than wide, fully two-thirds wider than the prothorax, parallel and nearly straight at the sides, which are abruptly rounded at the humeri; striæ rather coarse but only feebly impressed, wholly disappearing at two-fifths from the apex, the seventh as distinct as the others but much shorter; eighth deep, at some distance from the margin; punctures notably coarse, the usual two dorsal foveæ not traceable. Length (♂♀) 3.5–3.8 mm.; width 1.25–1.35 mm. Pennsylvania, Virginia and North Carolina (Asheville) . . . . . **semistriatum** Hald.

Body elongate, subparallel, moderately convex, polished, piceous-black, paler beneath, the legs rufous; elytra blackish, nubilously rufous externally toward base and near the apex; head large, with very moderate eyes and broad shallow sulci, three-fourths as wide as the prothorax and wider than an elytron; antennæ testaceous, thick but filiform, not quite as long as the elytra, the medial joints scarcely twice as long as wide; prothorax large, nearly three-fifths wider than long, the base only two-thirds as wide as the apex; sides strongly and subevenly arcuate, very oblique posteriorly, becoming briefly and abruptly sinuate just before the right and sharp angles; margins moderately reflexed; anterior impression distinct, the base depressed and sparsely punctulate; stria incomplete; foveæ small, oval, moderately deep, the carina very short; elytra one-half longer than wide, scarcely a fifth wider than the prothorax, the sides parallel and broadly arcuate, somewhat gradually rounding at the humeri; striæ moderate, distinctly impressed, obsolete only just before the apex, the seventh equally pronounced and extending behind the middle;

eighth much closer to the margin than in the preceding; punctures not very coarse, deep and notably close-set, disappearing only near the ends of the striæ, the usual two dorsal foveæ small but distinct, before basal and near apical third, on the third interval near the third stria. Length (♀) 3.7 mm.; width 1.2 mm. Colorado (Colorado Springs),—Wickham..... **constricticolle** Hayw.

In *constricticolle* the punctures of the series along the intervals are extremely small, and, unless searched for carefully, would be overlooked; the setæ of these interstrial punctures are very easily shed in both species.

Group XII—*variegatum*

Subgenus **Notaphus** Steph.

This group is much the largest in North America, but in the European fauna is far smaller than *Peryphus*. The species are smaller on the whole than in *Peryphus* and rather less diversified; some of them are among the more minute of the genus *Bembidion* and the largest are but little above the average in size and come far from attaining the stature of such as *haplogonum* and *stabile* of the *Peryphus* group. The mentum is broadly and generally more or less sharply triangular, but becomes obtusely rounded in such forms as *cordatum*, or margined at apex and very obtuse as in *scudderi*, or transversely truncate as in *obtusangulum*. While most of the forms in *Peryphus* have the integuments highly polished throughout, there is a large proportion of *Notaphus* species, where all or a part of the surface is alutaceous, sometimes producing a very dull appearance and, in a great many species, especially of the *variegatum* type, the surface is but slightly convex and the outline oblong. I have found it convenient to divide the group into nine sections as follows:

Prothorax as wide at base as at apex.....2
Prothorax narrower at base than at apex, more or less cordiform, except in a few species such as *lassulum* and *dentellum*.....4
2—Upper surface more or less alutaceous, at least anteriorly, except in *dorsale*, the elytra variegated, except in certain rare cases, the pale maculation formed by short lines on the intervals...(*variegatum*) 1
Upper surface polished throughout.....3
3—Sides of the prothorax arcuately oblique behind; body subcylindric in form; color uniform black or nearly so.....(*obtusangulum*) 42
Sides of the prothorax sinuously oblique behind; body very much smaller, more oblong and less convex, the elytra variegated...(*novellum*) 45
4—Elytra with the usual two dorsal foveæ.....5

Elytra each with three dorsal foveæ.....9
5—The dorsal foveæ on the third interval but very close to the third stria; body very small, polished throughout and uniformly deep black; frontal sulci parallel.....(*vile*) 46
The dorsal foveæ subaxial on the third interval.....6
6—Size moderate to rather large; frontal sulci parallel or nearly so....7
Size always very small.....8
7—Frontal sulci deep and parallel; entire surface highly polished. (*vinnulum*) 51
Frontal sulci generally parallel but broad and notably shallow as a rule; upper surface more or less alutaceous, at least anteriorly, wholly shining in *dejectum;* elytra variegated throughout, or only near the apex.....(*cordatum*) 52
8—Elytra oblong, variegated, frontal sulci parallel to feebly or strongly oblique; second antennal joint sometimes as long as the third. (*affine*) 68
Elytra oval, not variegated, the sulci parallel.....(*muscicola*) 85
9—Upper surface polished throughout, the elytra variegated; frontal sulci parallel; body moderately large in size.....(*scudderi*) 86

The species described by Mr. Hayward under the name *constricticolle*, was subsequently removed by the author and associated with *semistriatum*, and I have removed *tigrinum* Lec., to form the type of a separate subgeneric group, named *Leuchydrium* (ante p. 46); *ephippigerum* Lec., also included by Hayward, forms the type of the subgeneric group *Peryphodes* (ante p. 85). Unfortunately there are a considerable number of the described species in this group that I fail to identify among my material, such as *convexulum* Hayw., and *grandicolle*, *aratum*, *morulum*, *dyschirinum* and *vile* of LeConte, although I have a number evidently allied to the three last named; *æneicolle*, *versutum* and *rubiginosum* of LeConte, and *wickhami* Hayw., are also unknown to me at present; perhaps I may have unwittingly renamed some of them in the following tabular statement of our species:

1—Legs, antennæ and palpi deep black throughout.....2
Legs never deep black.....7
2—Elytra uniform in coloration, not maculate with paler tint, except occasionally to a minute degree.....3
Elytra with pale irregular fasciæ.....6
3—Entire upper surface brilliantly cupreous; elytra never with trace of paler spots.....4
Entire upper surface deep black, blue-black or feebly æneous; species allied to *coloradense* Hayw.....5
4—Body oblong, moderately convex, shining, only very slightly alutaceous anteriorly, black, with strong cupreous lustre; head three-

fourths as broad as the prothorax and as wide as an elytron, the sulci moderately narrow and deep; antennæ slender, four-fifths as long as the elytra, the medial joints more than twice as long as wide; prothorax short, more than one-half wider than long, widest at two-fifths from apex, the sides subevenly and distinctly rounded, oblique and nearly straight in about basal half, the angles obtuse but sharp; margins moderately reflexed; surface in part with feeble undulations, the impressions very feeble; base slightly depressed, the stria very fine, incomplete; foveæ short, very deep and sublinear, within broad shallow depressions, the carina strong and about a third the total length; elytra not quite one-half longer than wide, two-fifths wider than the prothorax, parallel, with feebly arcuate sides, obtusely rounded in apical third; striæ fine, entire, the punctures very fine, more distinct basally; seventh stria similar to the others; foveæ small, before basal and at apical third. Length (♂ ♀) 3.8–4.1 mm.; width 1.45 mm. California (Mendocino Co.; also one example labeled "Clark's Station").....**idoneum** n. sp.

A—Nearly similar but smaller and much narrower, the upper surface bright viridi-æneous; prothorax more than one-half wider than long, the sides almost evenly rounded from apex to base, not sinuate though straight very near the basal angles; impressions almost obsolete, the stria deeper, the carina distinct in basal fourth; elytra fully one-half longer than wide, only a third wider than the prothorax, more gradually ogival behind, the sculpture nearly similar. Length (♂) 3.6 mm.; width 1.25 mm. California (Lake Co.),—Fuchs.....**obsequens** n. subsp.

Body oblong, very moderately convex, similar to *idoneum* but with the elytra distinctly more elongate; head similarly well developed; antennæ slender, three-fourths as long as the elytra, the medial joints more than twice as long as wide; prothorax as in *idoneum* but smoother, more than one-half wider than long, the sides more prominently rounded at three-fifths from base, thence oblique and nearly straight anteriorly and posteriorly, becoming very feebly sinuate toward base; foveæ similarly small and deep but not subequal in length to the carina as they are in *idoneum*, relatively much shorter, the carina extending through basal two-fifths and strong; elytra three-fifths longer than wide, rather wider behind the middle than at base, a third wider than the prothorax, otherwise as in *idoneum* but somewhat more gradually rounding behind. Length (♀) 4.2 mm.; width 1.45 mm. California (Mokelumne Hill, Calaveras Co.), —Blaisdell.....**efficiens** n. sp.

Body similarly oblong but with less abbreviated prothorax and shorter, thicker antennæ, rather shining and cupreous above, moderately convex; head larger than in *idoneum* and with relatively less prominent eyes, similarly narrower than the prothorax but rather wider than an elytron; antennæ nearly three-fourths as long as the elytra, the medial joints more obconic and about twice as long as wide; prothorax as in *idoneum*, but broader and only one-half wider than long, the sides more broadly and less strongly rounded, becoming feebly sinuate before the angles, which are nearly right and very

sharp; surface nearly similar; elytra fully one-half longer than wide, parallel, with feebly arcuate sides, less obtusely rounded at apex, nearly two-fifths wider than the prothorax; striation similar, the punctures sometimes notably coarser basally. Length (♀) 4.2–4.4 mm.; width 1.55 mm. California (Siskiyou Co.),—Koebele.

continens n. sp.

5—Surface moderately convex, rather shining, slightly alutaceous anteriorly, deep black, sometimes feebly æneous; head three-fourths as wide as the prothorax and fully as wide as an elytron, with rather prominent eyes; antennæ rather long, the medial joints between two and three times as long as wide; prothorax one-half wider than long and much narrower than the elytra, the sides evenly, rather strongly rounded, oblique in about basal half, becoming slightly though evidently sinuate toward the angles; margins not broadly but strongly reflexed; impressions very feeble, the moderate stria incomplete; foveæ small, deep, sublinear, the carina long and strong, distant from the foveæ as in all the preceding species; elytra fully one-half longer than wide, about two-fifths wider than the prothorax, gradually parabolic behind, parallel, with broadly arcuate sides, the striæ fine, entire, scarcely at all impressed, the seventh feebler than the others; punctures fine, close-set, sometimes rather stronger basally; foveæ normally small, before basal and near apical third. The elytra are generally deep black throughout, but in one example there is a minute feeble and barely discoverable pale point externally near apex and another just outside the middle of the disk near basal fourth. Length (♂♀) 4.2–4.7 mm.; width 1.5–1.75 mm.; Vancouver Island (Victoria) and Washington State.

imperitum n.sp.

Surface of the elytra more polished and rather more convex, the dorsal foveæ larger and conspicuous, deep black throughout, feebly alutaceous anteriorly, the elytra without trace of pallid maculation; head rather larger but otherwise similar, distinctly wider than an elytron, the antennæ similar; prothorax throughout nearly as in *imperitum*, one-half wider than long and with the oblique sides basally barely distinguishably sinuate before the angles, which are sharp and nearly right, but the carina is about as long as the fovea and not much longer as it is in that species; elytra rather shorter, broader and more convex, scarcely one-half longer than wide, a third wider than the prothorax; striæ entire, not so fine and distinctly impressed, the punctures a little coarser, similarly close-set and gradually obsolete behind; second and fifth striæ similarly grooved at tip; foveæ similarly placed but larger and stronger, not impressed but abruptly outlined. Length (♂) 4.4 mm.; width 1.5 mm. Washington State..... **prociduum** n. sp.

6—Body oblong, rather convex, black, alutaceous anteriorly, the under surface and epipleura black; elytra with a small pale point at the base of the fifth interval, two similarly small on the third interval before and behind basal third, a fascia near basal third, broad on the margin, becoming rapidly attenuate inward and ending on the fifth interval, an entire biarcuate irregular fascia near apical third and

some pale area at apex, the pale areas sharply defined; head rather small, two-thirds as wide as the prothorax and narrower than an elytron; antennæ black, the basal joint rufous, with a black streak above, three-fourths as long as the elytra, the medial joints barely twice as long as wide; prothorax not one-half wider than long, the parallel sides broadly, subevenly arcuate, becoming gradually very feebly sinuate toward the angles; impressions feeble, the stria nearly entire, fine; foveæ large, shallow, rugulose, the bottom an elongate deep linear impression, the carina long, distinct; elytra barely one-half longer than wide, almost one-half wider than the prothorax, parallel, with broadly arcuate sides, obtusely rounded at apex; striæ entire, rather fine, feebly impressed, the punctures fine, obsolete near the apex; foveæ small, at basal and apical third. Length (♂) 3.4–3.5 mm.; width 1.3 mm. Michigan (Marquette),—Sherman. . . . . **nigripes** Kirby

7—Species occurring only to the westward of the Rocky Mountain divide 8

Species inhabiting only the regions east of the Rocky Mountains. 31

8—Pale elytral maculation very restricted. 9

Pale maculation much more extended, though sometimes very nubilous and feebly defined. 10

9—Body shining, black, the anterior parts but faintly alutaceous; elytra with a short narrow faint fascia externally near basal third, and a small external spot near apical fourth; under surface black, the epipleura rufous, at least basally; legs piceo-rufous; head well developed, three-fourths as wide as the prothorax and even somewhat wider than an elytron, the eyes prominent; sulci moderately deep; antennæ slender, black, the basal joint rufous, black above, four-fifths as long as the elytra, the medial joints nearly three times as long as wide; prothorax about one-half wider than long; base somewhat wider than the apex; sides subevenly, moderately rounded, rather abruptly sinuate at the angles, which are right and sharp; surface smooth, the impressions obtuse but evident, the fine stria only extending between them; foveæ small, deep, sublinear, the carina long and strong; elytra one-half longer than wide, only a third wider than the prothorax, parallel, with feebly arcuate sides, rather gradually parabolic behind; striæ entire but very fine, unimpressed, the punctures very fine, not very remote; foveæ small, before basal and near apical third. Length (♂) 3.8–4.0 mm.; width 1.3–1.55 mm. California (San Francisco). Two examples, taken by the writer.

augurale n. sp.

Body in color and maculation nearly as in the preceding, but more æneous above; legs brownish-rufous, the epipleura obscure rufous; anterior parts more alutaceous; head not quite so large, scarcely as wide as an elytron, the antennæ nearly similar, but with the medial joints about two and one-half times as long as wide; prothorax much narrower, only two-fifths wider than long, barely wider at base than at apex, the sides subevenly though less strongly rounded and becoming sinuate, not at the angles but well before them, being parallel in basal seventh; surface nearly similar but duller and with

the margins not quite so strongly reflexed; elytra longer, more than one-half longer than wide and but little less than one-half wider than the prothorax, otherwise nearly as in the preceding throughout, except that the sides are rather more gradually rounded toward the humeri. Length (♀) 4.4 mm.; width 1.65 mm. California (Gualala River, Mendocino Co.).....**consuetum** n. sp.

Body elongate-oblong, shining, greenish-black, the head distinctly, the pronotum scarcely at all, alutaceous; elytra at about basal third with two small pale spots on the third, one on the fifth and two short lines side by side on the seventh and eighth intervals; on the eighth with a short line at the middle, and, near posterior third, with short lines forming a fascia from the third to eighth interval; under surface piceous—possibly immature, with the legs and epipleura flavopiceous; head with prominent eyes, scarcely three-fourths as wide as the prothorax, about as wide as an elytron, the sulci rather shallow; antennæ slender, piceous-black, the basal joint rufous, black above, about three-fourths as long as the elytra, the medial joints fully three times as long as wide; prothorax distinctly wider at base than at apex, not quite one-half wider than long, the sides evenly and moderately rounded, becoming gradually scarcely visibly sinuate toward the somewhat obtuse but sharp angles; impressions very feeble, the stria fine, incomplete; foveæ large, shallow, rugulose, with a deep linear depression at the middle, the carina long and strong; margins well reflexed; elytra more than one-half longer than wide, two-fifths wider than the prothorax, obtusely parabolic at tip, parallel, with but very feebly arcuate sides; striæ fine, entire, not distinctly impressed, the punctures fine; foveæ small, before basal and at apical third. Length (♂) 5.0 mm.; width 2.0 mm. Utah (Milford),—Wickham.....**evidens** n. sp.

Body oblong, less elongate and very moderately convex, shining, black, more or less alutaceous anteriorly, the elytra with a small pale point on the third interval near basal fifth, on five to eight near basal third an irregular fascia of very small spots, and, near posterior third, a very short external fascia of short pale lines; legs dark rufous, the epipleura more flavate; head fully as wide as an elytron, the sulci rather broad and shallow; antennæ slender, nearly four-fifths as long as the elytra, colored as in *evidens*, but the medial joints are not quite three times as long as wide; prothorax nearly one-half wider than long, the evenly and distinctly rounded and well reflexed sides becoming distinctly sinuate basally, but parallel only at the angles, which are right and sharp; impressions feeble, the much abbreviated stria fine; foveæ short, very deep and sublinear, the carina long and distinct; elytra parallel, with broadly arcuate sides, barely one-half longer than wide and two-fifths wider than the prothorax, obtusely parabolic at apex; striæ entire but very fine, unimpressed, the punctures very fine; foveæ small, before basal and at apical third. Length (♀) 4.6–4.9 mm.; width 1.8 mm. California (Sonoma Co.). Two examples.....**simulator** n. sp.

10—Basal foveæ of the pronotum large, very shallow and strongly rugose.....11

Basal foveæ deep and sublinear, as in all the preceding species..... 12

11—Form elongate and rather narrow, convex, black, the anterior parts with strong æneous-green lustre, shining medially but roughly scabrous toward the sides; elytra with the fasciæ of pale lines much extended, leaving a biarcuate black fascia about the middle, also some dark area on the suture expanded near apical fourth; a small dark spot surrounding the anterior fovea is also evident; under surface black, the epipleura piceo-rufous, the legs rufous; head large, but little narrower than the prothorax, with very prominent eyes, the sides of the front rugose, the sulci rather deep; antennæ moderate, fuscous, very gradually testaceous basally; prothorax barely two-fifths wider than long, the parallel sides but feebly arcuate, becoming broadly, distinctly sinuate basally; impressions almost obsolete, the stria subentire; carina moderate; elytra oblong-oval, parallel, with evenly arcuate sides, very gradually rounding at the humeri, more than one-half longer than wide, about one-half wider than the prothorax; striæ not very fine and somewhat impressed, entire and deep to the apex; punctures small but deep and very close; seventh stria as strong, deeply impressed and entire as the others; foveæ rather before basal and apical third. Length (♂ ♀) 3.65–4.7 mm.; width 1.25–1.7 mm. California (northern coast regions) and Nevada (Reno). Abundant..... **variolosum** Mots.

Form not quite so elongate and much smaller in size, the anterior parts black, with strong green lustre, alutaceous, not so roughly scabrous laterally as in the preceding; elytra with the pale coloration pervading the entire surface, and but feebly shaded in the blacker areas alluded to under *variolosum;* under surface black, the epipleura and legs pale flavo-testaceous; head much smaller, with less prominent eyes, the sulci narrower and deeper; antennæ not so long and more slender, fusco-testaceous, gradually clearer basally, the medial joints barely more than twice as long as wide; prothorax more evidently wider than the head, two-fifths wider than long, formed nearly as in the preceding but with the large shallow foveæ less coarsely scabrous and exhibiting traces of a short, deeper linear depression at the middle, the carina longer; elytra shorter, one-half longer than wide, two-fifths wider than the prothorax, the parallel sides less arcuate, more rapidly rounding about the humeri; striæ finer, not impressed, entire, the punctures small but more distinct and much less close-set; anterior fovea more distant from the base. Length (♂ ♀) 3.0–3.8 mm.; width 1.15–1.35 mm. Nevada (Elko—Wickham; also from an unrecorded locality in the state)..... **umbratum** Lec.

12—Body narrow, convex and subcylindric, strongly shining, the head only very slightly alutaceous, black, with æneous lustre, the elytra piceous, with a nubilous basal spot and another, external, near apical fourth, testaceous; under surface piceous-black, the epipleura flavate, the legs rufous; head four-fifths as wide as the prothorax and as wide as an elytron, the eyes moderately prominent, the sulci rather narrow and sharply defined; antennæ fuscous, gradually obscure rufous basally, three-fourths as long as the elytra, the medial joints between two and three times as long as wide; prothorax barely

two-fifths wider than long, the nearly truncate apex, with well defined angles, scarcely as wide as the base; sides feebly arcuate, gradually slightly sinuate basally, the angles rather obtuse though sharp; margins but finely reflexed; base rather depressed; anterior impression feeble, dilated and transversely rugulose medially, the stria very fine; foveæ small, deep, linear, the carina long and distinct; elytra more than one-half longer than wide, scarcely two-fifths wider than the prothorax, subparallel, with feebly arcuate sides, very rapidly rounded at the humeri, the apex circularly rounded, the striæ entire but extremely fine, unimpressed, the punctures so fine as to be almost indistinct, larger in the first stria basally. Length (♂) 3.5 mm.; width 1.35 mm. California (San Francisco).

curiosum n. sp.

Body oblong, more or less suboval, of the usual type 13

13—Sides of the prothorax becoming not very abruptly straight and parallel in basal fifth or sixth 14

Sides of the prothorax moderately oblique and more or less evidently sinuate basally, but never becoming quite parallel before the basal angles 15

14—Surface rather convex, deep black and shining, the head distinctly, the pronotum barely, alutaceous; elytra piceous, very feebly and indefinitely paler near the humeri, and with a transverse and irregular, suturally interrupted nubilous rufous fascia at posterior third; under surface black, the epipleura and legs uniform pale piceo-rufous; head three-fourths as wide as the prothorax, hardly as wide as an elytron; sulci very shallow, with their sharp external margins irregularly sinuous; antennæ long and slender, blackish, the basal joint rufous, shaded above, the medial joints three times as long as wide; prothorax two-fifths wider than long, the sinuate apex with distinct angles, narrower than the base; sides most rounded at about the middle, straighter anteriorly, broadly and conspicuously reflexed, finely so at apex; impressions distinct, the stria distinct, limited by them; foveæ moderately impressed, in part deeper and obliquely sublinear, the carina strong, moderately long; elytra one-half longer than wide, nearly one-half wider than the prothorax, parabolic at apex, wider behind the middle than at base, moderately rounded at the humeri; striæ entire, very fine apically, distinct but scarcely impressed anteriorly, the punctures not coarse but distinct, moderately separated; foveæ small, near basal fourth and apical third, the anterior within large shallow indentations. Length (♀) 5.0 mm.; width 1.9 mm. British Columbia (Metlakatla),—Keen.

mobile n. sp.

Surface and coloration nearly as in *mobile*, the head less alutaceous, the rufous coloration of the elytra very nubilous though traceable in nearly basal half, the apex also more definitely pale; legs and epipleura in great part rufous; femora blackish, rufous basally and apically; hypomera abruptly rufous—faintly so in *mobile;* head similar but with deeper sulci; antennæ almost similar; prothorax nearly similar, except that the widest part, with prominently rounded sides, is slightly before the middle, the apex less sinuate and with blunter

angles, and the side margins are less broadly reflexed; impressions not so strong, the stria impressed, incomplete; foveæ and carina similar, the general surface postero-laterad similarly feebly rugulose and dullish; elytra similar but less broad, rather more than one-half longer than wide; striæ and punctures nearly as in *mobile*, the foveæ more nearly at basal and apical third. Length (♂) 4.5 mm.; width 1.65 mm. California (Truckee)..... **semotum** n. sp.

Surface and coloration nearly as in the two preceding, the head, sulci and antennæ almost as in *mobile;* head and prothorax larger than in *semotum;* elytra with the faint pallidity externally and at base barely traceable, the fascia similar; apex as in *mobile*, not definitely paler; prothorax in outline nearly as in *semotum*, but only a third wider than long, also with the apex sinuate and with rather sharp angles as in *mobile;* impressions distinct, the incomplete stria moderate; carina longer and stronger than in either of the preceding; elytra differing from either, oblong-oval, parallel, with distinctly arcuate sides, nearly similar in proportional relationships but with the striæ, though entire, extremely fine and unimpressed, the punctures very minute and widely separated; seventh stria observable but faint; foveæ small, at basal fourth and apical third. Length (♂) 4.8 mm.; width 1.85 mm. California (Duncan's Mills, Sonoma Co.).

nubiferum n. sp.

15—Body notably large and stout, the general habitus much as in the three preceding species; black, shining, the anterior parts with feeble greenish lustre, the head rather evidently alutaceous; elytra piceous, broadly, somewhat nubilously rufescent toward base externally, and with a faint fascia near apical third as in the preceding; legs rufous, the femora somewhat clouded medially; head two-thirds as wide as the prothorax and narrower than an elytron, the moderate sulci having an acute sinuous outer limit; palpi piceous, blackish distally; antennæ long and slender, fuscous, in part pale basally; prothorax nearly one-half wider than long, widest at anterior two-fifths, the sides there strongly, subevenly rounded, oblique and broadly sinuate in about basal half, the angles sharp and nearly right, the anterior but slightly blunt; surface nearly as in *mobile*, the margins strongly reflexed; base and apex equal; elytra one-half longer than wide, almost one-half wider than the prothorax, the sides not very rapidly rounding at the humeri; striæ entire, not very fine, impressed, strongly so basally, where the generally very fine punctures become stronger and rather close; foveæ asperulate, near basal fourth and apical third. Length (♀) 6.0 mm.; width 2.4 mm. Idaho (Cœur d'Alene),—Lt. J. A. Leyden..... **gulosum** n. sp.

Body not quite so large, rather depressed above, similar in coloration, the legs and inflexed sides of the pronotum and elytra pale; head well developed, the sulci shallow, their external sides prominent and sinuous; antennæ as in the preceding; prothorax scarcely two-fifths wider than long, strongly rounded and reflexed at the sides, finely reflexed anteriorly, the oblique sides basally, very moderately sinuate, the angles obtuse but sharp; surface nearly as in the preceding; impressions strong, the carina long and strong; elytra oblong-oval,

colored and with vague maculation as in the preceding forms; striæ fine, scarcely at all impressed, the punctures very fine and rather widely separated; foveæ near basal fourth and apical third. Length (♀) 5.5 mm.; width 2.2 mm. California (St. Helena, Napa Co.—San Diego and San Francisco—LeConte)..... **approximatum** Lec.

Body smaller and narrower.....16

16—Body narrower, more elongate and more convex, the elytral markings frequently rather poorly defined.....17

Body slightly less narrow, or more abbreviated, and less convex, the elytral markings usually more sharply defined; species of the *varium* and *patruele* type.....27

17—Prothorax but slightly transverse and with feebly rounded sides; elytra more or less alutaceous, the anterior parts strongly so. Narrow, black, with greenish or subæneous lustre; elytra as in all the preceding of this section, piceous, with very nubilous markings; legs dark rufous; head four-fifths as wide as the prothorax and as wide as an elytron, the sulci broad and shallow; antennæ fuscous, less so at base, the medial joints scarcely more than twice as long as wide; prothorax less than two-fifths wider than long, the sides basally but feebly converging and broadly, just visibly sinuate, the angles more than right but sharp; margins very moderately reflexed; base feebly depressed and slightly punctulate; impressions feeble, the stria fine; foveæ short but deep, the carina rather long and distinct; elytra one-half longer than wide, about two-fifths wider than the prothorax, parallel, with the sides broadly arcuate, gradually rounding to the humeri; striæ entire, fine, not noticeably impressed, the punctures fine, gradually obsolete posteriorly, not very close-set; foveæ before basal and behind apical third as a rule. Length (♂♀) 4.0–4.2 mm.; width 1.3 mm. California (Alameda). Three specimens.

devinctum n. sp.

Prothorax more transverse and well rounded at the sides.....18

18—Prothorax distinctly narrower at base than at apex, although the species evidently belong to the present, rather than to the *cordatum* section of the subgenus.....19

Prothorax as wide at base as at apex to somewhat wider.....20

19—Form moderately narrow, convex, feebly viridi-æneous and notably dull anteriorly, the elytra æneo-piceous, paler toward the sides in more than basal half, extending inward at base and near basal third, and with a basal line and subbasal dot on the third interval, also with the apex and a narrow irregular biarcuate fascia near apical third pale; under surface piceous, the epipleura, hypomera and legs pale piceous-brown; head three-fourths as wide as the prothorax, the sulci very shallow, the eyes moderately prominent; antennæ moderate, piceous, the bases of the joints paler, the first three testaceous, blackish above; medial joints slightly more than twice as long as wide; prothorax two-fifths wider than long, the sides strongly rounded and only finely reflexed, oblique and evidently sinuate behind, the angles more than right, sharp; impressions very feeble, the stria fine; foveæ small, deep, linear, the carina distinct, one-fourth the total

length; disk more shining medially than laterally; elytra elongate, oblong-oval, three-fifths longer than wide, less than one-half wider than the prothorax, gradually ogival behind; striæ rather fine, not impressed, entire, the punctures fine, moderately close, traceable to the declivity; foveæ small, before basal and behind apical third. Length (♀) 5.0 mm.; width 1.65 mm. California (San Diego).
extricatum n. sp.

Form narrower, rather convex, black, with moderate alutaceous lustre, the elytra piceous, with traces of paler markings of the same character as in the preceding, but much more retracted; inflexed sides and legs testaceous-brown, the under surface black; head smaller, nearly three-fourths as wide as the prothorax, with feeble sulci and moderate eyes; antennæ slender, of more uniform black than in the preceding, the basal joint rufous beneath, the medial joints not distinctly more than twice as long as wide; prothorax shorter, fully one-half wider than long, the sides strongly but more anteriorly rounded, oblique in nearly basal half, becoming faintly sinuate only at the angles; margins moderately reflexed; apex almost truncate; surface with some wavy rugulosity, the impressions feeble; foveæ moderately deep, equal in length to the carina and less than a fourth the total length; elytra oblong-oval, more than one-half longer than wide, two-fifths wider than the prothorax, the striæ entire, distinctly impressed, fine apically, the punctures moderately separated, strong and more conspicuous basally; foveæ only slightly before basal and behind apical third; third interval wider than the others. Length (♀) 4.0 mm.; width 1.3 mm. California (Tehatchapi Pass),—Wickham.....**caudex** n. sp.

Form somewhat ventricose, less convex, much smaller in size, slightly viridi-æneous and dull anteriorly, the elytra piceous, each with a basal spot, a short fascia at basal third, formed by spots on intervals three to five, a wider but similarly formed fascia at apical third, from the margin to interval five, and the apex, pale; under surface and legs as in *extricatum;* head nearly four-fifths as wide as the prothorax, with prominent eyes and broad, moderately deep sulci; antennæ slender, nearly as in *caudex*, the medial joints barely twice as long as wide; prothorax short, one-half wider than long; sides moderately rounded in apical, converging in basal, half, broadly but distinctly sinuate basally, rather strongly reflexed, the angles nearly right, sharp; impressions feeble; foveæ small, short, narrow and linear, the carina longer, rather strong, nearly a third the total length; elytra oblong, less than one-half longer than wide, almost one-half wider than the prothorax, broadly parabolic in apical third; striæ rather fine but strong, impressed suturally, the seventh a row of fine punctures, becoming a distinct stria apically; punctures small but deep and rather close-set; foveæ near basal fourth and apical third. Length (♀) 3.6 mm.; width 1.25 mm. Arizona (near Benson),—Dunn.....**pimanum** n. sp.

20—Sides of the prothorax very distinctly and more broadly sinuate basally, sometimes almost parallel for some distance before the angles.....21

Sides rounded virtually to the base, very faintly sinuate only at the angles 22

21—Body oblong-oval, only moderately convex, rather shining, the anterior parts bright viridi-subæneous and only slightly alutaceous; elytra æneo-piceous, marked rather indefinitely with paler as detailed under *extricatum;* legs rufous, the epipleura flavo-piceous, the under surface black; head fully three-fourths as wide as the prothorax and nearly as wide as an elytron, with rather prominent eyes, the sulci not very broad and somewhat deep; antennæ rather thick, piceous, rufous beneath toward base, the medial joints obconic and slightly more than twice as long as wide; prothorax two-fifths wider than long, the base slightly wider than the apex, the sides parallel, broadly and very moderately rounded, gradually oblique and broadly sinuate basally, rather finely reflexed, the angles sharp and nearly right; stria very fine, subentire, the impressions very faint; foveæ deep but small, linear, the carina almost twice as long, strong, somewhat over one-fourth the total length; elytra oblong, parallel, barely one-half longer than wide, less than one-half wider than the prothorax, rounded behind; striæ entire, rather fine, barely visibly impressed, very fine behind, the punctures fine, moderately separated; foveæ near basal and apical third. Length (♂) 4.4 mm.; width 1.6 mm. California (San Diego) ..... **consentaneum** Lec.

A—Almost similar to the preceding but somewhat narrower and more elongate, the head equally as well developed but with less prominent eyes, also broader and deeper anterior part of the sulci; prothorax nearly similar but barely two-fifths wider than long; elytra more elongate, nearly three-fifths longer than wide and more gradually rounded behind, the striæ finer and less distinctly punctate, except basally, the foveæ more widely separated. Length (♂♀) 3.8–4.7 mm.; width 1.4–1.72 mm. California (Sta. Barbara),—Dunn ..... **barbaræ** n. subsp.

Body much broader, nearly similar in color and lustre; head larger, with more prominent eyes, wider than an elytron, the sulci broader and shallower; antennæ nearly similar in length and coloration but thicker, the medial joints more strongly obconic, more than twice as long as wide; prothorax larger and much broader, one-half wider than long, widest slightly before the middle, the finely reflexed sides much more broadly and evenly rounded, more rapidly oblique basally, becoming almost parallel in basal fifth or sixth; stria more nearly entire, the impressions subobsolete; foveæ and carina similar in size and proportions; elytra shorter, barely one-half longer than wide and only a third wider than the prothorax, more obtusely rounded behind; striæ very fine, similarly unimpressed and even more finely and less closely punctulate, the third interval slightly wider than the others; foveæ before basal and behind apical third. Length (♀) 4.2 mm.; width 1.5 mm. California (eastern shore of San Francisco Bay) ..... **derisor** n. sp.

22—Eyes only moderate in size but very prominent 23

Eyes somewhat larger as a rule, but only moderately prominent 24

23—Form elongate-suboblong, moderately convex, black, alutaceous and

feebly æneseent anteriorly, the elytra dark piceous, with very nubilous paler markings at the base of each and toward the sides near basal and apical third; under surface black, the abdomen rufous posteriorly; legs and epipleura dark rufous; head fully three-fourths as wide as the prothorax and wider than an elytron, the sulci very moderate; antennæ notably slender, piceous-black, obscurely rufous basally, with the medial joints not quite three times as long as wide; prothorax about as wide at base as at apex, the sides broadly and very evenly arcuate almost throughout, about straight at the minutely prominent basal angles, the anterior bluntly rounded, the margins rather broadly reflexed; impressions subobsolete, the stria short and fine; foveæ deeply but not abruptly impressed, linear, the carina strong, longer, more than a fourth the total length; elytra nearly three-fifths longer than wide, two-fifths wider than the prothorax, gradually ogival behind, the striæ entire, very fine, unimpressed, very finely and closely punctate; third interval not notably wider, the foveæ small, before basal and near apical third. Length (♀) 4.7 mm.; width 1.6 mm. California (San Diego). **cernens** n. sp.

Form nearly similar but very much smaller in size, rather convex, the coloration and lustre almost similar, the elytra piceous-black, with almost similar nubilous markings; head almost as in *cernens*, but not quite so large, barely as wide as an elytron; antennæ slender, blackish, obscurely rufous basally, the medial joints between two and three times as long as wide; prothorax shorter, fully one-half wider than long, widest at apical two-fifths, the sides rather strongly rounded, less so basally, becoming just visibly sinuate at the angles, which are right and sharp; margins well reflexed; impressions rather distinct, the abbreviated median stria well impressed; foveæ moderate, impressed, linear at the bottom, the carina distinct; elytra fully one-half longer than wide, two-fifths wider than the prothorax, very gradually strongly rounded behind and parallel, with distinctly arcuate sides; striæ entire, not very fine and, toward the suture, somewhat deeply impressed, the punctures basally rather strong, becoming rapidly fine and scarcely traceable behind the middle; foveæ strong, generally before basal and near apical third, the third interval somewhat wider than the others, all the intervals toward the suture convex. Length (♂♀ ?) 3.4–3.6 mm.; width 1.25–1.3 mm. Arizona (probably southern)..... **latebricola** n. sp.

24—Prothorax larger and broader, about three-fourths as wide as the elytra or more. Body oblong-oval, rather convex, shining, the head and sides of the pronotum more or less alutaceous, black, with faint æneous lustre, the elytra piceous, with faint paler markings somewhat as in *extricatum*, this being the general type form of markings in this subsection; legs and epipleura piceo-rufous; head rather small, two-thirds as wide as the prothorax and narrower than an elytron; antennæ blackish, obscurely rufous basally, rather thick, the medial joints not quite twice as long as wide; prothorax one-half to three-fifths wider than long, the sides rounded evenly to just before the basal angles, where they become feebly sinuate; impressions very faint, the stria distinct, not quite entire; foveæ deep, short, the carina

longer, strong, about a fourth the total length; elytra one-half longer than wide, parallel, with evidently arcuate sides, obtusely rounded at apex, about a third wider than the prothorax; striæ fine, unimpressed, distinctly and rather closely punctate basally, the punctures gradually obsolete a little behind the middle; third interval but slightly broadened; foveæ rather strong, before basal and somewhat behind apical third. Length (♂♀) 3.6–3.8 mm.; width 1.33–1.4 mm. California (Tehatchapi Pass),—Wickham.

expositum n. sp.

Prothorax relatively almost as in *expositum*, fully three-fourths as wide as the elytra. Body much more elongate, the coloration nearly similar throughout; head longer and larger, the eyes very much less prominent, the sulci similarly deep and parallel; antennæ fuscous, barely two-thirds as long as the elytra, even more slender basally and incrassate distally than in *expositum*, the medial joints more than twice as long as wide; prothorax nearly similar in form and structure but relatively very much less wider than the head; elytra almost three-fourths longer than wide, scarcely a third wider than the prothorax, very gradually and more narrowly parabolic at apex, parallel, with arcuate sides and with more basally exposed humeri; striæ and punctures almost similar; foveæ much more widely separated, before basal and behind apical third, the third interval not much broader than the others. Length 4.2 mm.; width 1.3 mm. California (San Diego) . . . . . **jacobianum** n. sp.

Prothorax never relatively so wide as in *expositum* 25

25—Outline somewhat ventricose, the elytra relatively broader. Black, viridi-æneous and rather alutaceous anteriorly, the elytra piceous, with nubilous paler marking at base, at the sides in basal third and on the third interval near the base, also with a nubilous biarcuate fascia near apical fourth; legs and epipleura pale rufous; head rather well developed, the antennæ moderate, fuscous, rufous beneath basally, the medial joints between two and three times as long as wide; prothorax very nearly one-half wider than long, equally wide at base and apex, the sides evenly and moderately rounded, becoming feebly sinuate at the right, prominent and sharp basal angles; margins finely reflexed; surface with some rugulosity at base, the impressions almost obsolete, the stria very fine; foveæ small, deep, about half as long as the distinct carina, which is more than a fourth the total length; elytra scarcely one-half longer than wide, oblong, two-fifths wider than the prothorax, rather obtusely rounded behind, the striæ not very fine, more or less impressed, entire, the punctures very distinct, especially toward base, and rather well separated; third interval much wider than the others; foveæ rather before basal and behind apical third. Length (♂) 4.4 mm.; width 1.8 mm. California (San Francisco) . . . . . **formale** n. sp.

A—Similar to *formale* but with relatively somewhat larger prothorax, the body smaller; prothorax with the sides more strongly arcuate and more distinctly reflexed, otherwise nearly similar, except that the apex is rather more distinctly narrower than the base; elytra similar in outline and maculation, but with the striæ unimpressed

and with the fine punctures not so strong basally and rather more close-set throughout; third interval distinctly wider than the others. Length (♂) 4.0 mm.; width 1.5 mm. California (San Diego) ..... **reconditum** n. subsp.

Outline narrower and more elongate, less ventricose 26

26—Form elongate-oval, rather convex, shining, the head but slightly alutaceous, black, with greenish lustre, the elytra piceous, each with a nubilous pale spot at base and with an imperfect nubilous fascia near apical third; under surface black, the legs and epipleura pale testaceous; head well developed, fully three-fourths as wide as the prothorax and as wide as an elytron, the sulci extremely shallow; antennæ fuscous, rufous beneath at base, the medial joints between two and three times as long as wide; prothorax only two-fifths wider than long, the sides rather strongly, subevenly arcuate and moderately reflexed, becoming feebly sinuous for some distance before the minutely prominent basal angles; surface with some transverse wavy rugulosity, the impressions very feeble, the stria fine, not quite entire; foveæ and carina as in the preceding; elytra more than one-half longer than wide, not quite one-half wider than the prothorax, gradually parabolic behind; striæ very fine, unimpressed, the punctures very fine, well separated, subequal, traceable to the declivity; third interval barely at all wider than the others, the small foveæ before basal and behind apical third. Length (♂ ♀) 3.8–4.2 mm.; width 1.35–1.6 mm. California (San Francisco and Alameda). Description taken from the male; the female is rather smaller and narrower, with the antennæ less elongate ..... **franciscanum** n. sp.

Form rather narrower than in *franciscanum* and slightly more depressed, shining, the greenish anterior parts somewhat alutaceous; color as in *franciscanum*, except that the piceous elytra have more pallid maculation toward and surrounding the humeri, and that the transverse posterior biarcuate rufous fascia is entire and more conspicuous than in any other species of the subsection; apices pale; head moderate, but as wide as an elytron; antennæ fusco-testaceous throughout, thicker than in any of the allied species, the medial joints barely twice as long as wide; sulci rather narrow, moderately deep; prothorax shorter than in *franciscanum*, one-half wider than long, the sides similar but not evidently sinuate, except at the minutely prominent angles; surface similar, except that the impressions are rather more obvious; elytra long, fully three-fifths longer than wide, scarcely two-fifths wider than the prothorax; striæ very fine, unimpressed, the punctures fine and widely separated; third interval much wider than the others, the foveæ as in *franciscanum*. Length (♂) 3.8 mm.; width 1.4 mm. California (Alameda).

ornatellum n. sp.

Form narrow, very moderately convex, smaller in size, shining, the head but slightly alutaceous, black, not metallic; elytra piceous, paler at the sides in basal half, extending inwardly to the second stria, with diminishing width, and inclosing a piceous spot at the anterior dorsal fovea, also with a wide nubilous fascia near apical fourth, widely interrupted at the suture, the anterior pale area sometimes united

with it at the margin; legs and epipleura rufous; head moderate, with rather deep sulci; antennæ rather short and thick, fusco-testaceous, the medial joints twice as long as wide; prothorax one-half wider than long, the well rounded sides becoming feebly sinuate for a sensible distance before the prominent, right and sharp hind angles; surface as in the preceding species of this subsection; elytra one-half longer than wide, one-half wider than the prothorax, gradually parabolic behind, the fine entire striæ never more than feebly impressed and having fine, moderately separated punctures, indistinct behind apical third; foveæ before basal and behind apical third, the third interval but very slightly wider than the others. Length (♂ ♀) 3.2–4.0 mm.; width 1.2–1.35 mm. California (San Diego). Six examples..... **procax** n. sp.

27—Base of the prothorax slightly narrower than the apex. Moderately elongate; head and lateral and basal part of the pronotum dull and alutaceous, black, with feeble viridi-æneous lustre; elytra nearly black, moderately shining, each with a basal spot, prolonged on the third and fifth intervals, a fascia rapidly attenuated inwardly near basal third, another irregularly arcuate near apical third, the apex and a spot on the third interval before the middle, pale subflavate; under surface black, very shining, the abdomen with nubilous lateral spots, the epipleura flavate, the legs darker, rufous; head well developed, with notably prominent eyes; antennæ very slender, piceous, obscurely rufous basally, the medial joints nearly three times as long as wide; prothorax three-fifths wider than long, the sides strongly, subevenly arcuate, deeply sinuate behind, becoming subparallel in basal fifth or sixth, evenly and moderately reflexed; impressions feeble, subrugulose, the stria fine, not entire; foveæ broadly shallow, with a deep short linear impression, the carina longer than the fovea and distinct; elytra one-half longer than wide, two-fifths wider than the prothorax, parallel, with broadly arcuate sides; striæ equal, entire, fine, barely visibly impressed, the punctures fine and close-set, traceable to the declivity; foveæ at one-third and three-fifths, the third interval moderately broadened. Length (♀) 4.3 mm.; width 1.65 mm. California (Sta. Cruz)..... **operosum** n. sp.

Base of the prothorax never narrower than the apex.....28

28—Body above the average of the subsection in size. Oblong, colored throughout very nearly as in the preceding, but with the elytral markings less sharply defined, sometimes rather nubilous; head well developed, with prominent eyes and distinct sulci, moderately dull; antennæ similar in color, still longer, slender, the medial joints more than three times as long as wide; prothorax larger, one-half wider than long or less, the parallel sides evenly but less strongly arcuate, gradually becoming feebly sinuate toward the right and sharp angles; margins rather strongly reflexed; surface nearly as in the preceding, both the linear part of the foveæ and the carina longer, the latter more than a fourth the total length; elytra larger and rather more than one-half longer than wide, similar in outline, a third to two-fifths wider than the prothorax, the striæ finer and wholly unimpressed, the punctures fine, close, traceable to the declivity; sev-

enth stria similar to the others, as usual in this group; foveæ before basal and behind apical third, much more widely separated than in *operosum*. Length (1♂, 7♀) 4.5–5.2 mm.; width 1.7–2.0 mm. California (San Francisco and northward along the coast). [*Notaphus flammulipennis* Mots.]..... **indistinctum** Dej.

Body much smaller in size.....29

29—Head smaller, with less prominent eyes, not as wide as an elytron, the elytra without obvious basal pale spot. Form oblong-oval, more convex than usual, black, the anterior parts subopaque and with feeble olivaceous lustre; elytra black, each with a transverse fascia of pale lines near basal and apical third, the anterior broad at the margin and rapidly attenuated inwardly, the posterior oblique, not reaching the suture; third interval with two pale spots—before and behind basal third, the extreme apex also pale: under surface black, the legs and epipleura pale; head nearly four-fifths as wide as the prothorax, with somewhat broad and deep sulci; antennæ black, rufous beneath at base, three-fourths as long as the elytra, the medial joints barely twice as long as wide; prothorax rather small, nearly one-half wider than long, widest barely before the middle, the sides broadly, subevenly rounded, oblique and feebly sinuate basally, finely reflexed; surface nearly smooth, dull, the impressions subobsolete, the stria fine, not quite entire; foveæ rugose, rather broadly impressed, oval, moderately deep, the carina rather short, equal to the fovea, distinct; elytra less than one-half longer than wide, nearly one-half wider than the prothorax, circularly obtuse at tip, the parallel sides broadly arcuate; striæ rather fine, feebly impressed, the punctures minute, obsolete near posterior third; foveæ near basal and apical third. Length (♀) 3.2 mm.; width 1.3 mm. Oregon (Corvallis). Moznette, 1909..... **debiliceps** n. sp.

Head larger, very well developed, with notably prominent eyes, fully as wide as an elytron; elytra always with pale basal spots.....30

30—Form moderately elongate, suboval, slightly convex, colored nearly as in the preceding, but less deep black and with rather more æneous lustre; elytra with sharply marked maculation of short lines, forming two fasciæ and a pale apex, more developed than in the preceding but in general similar, excepting the distinct pale basal spot; head nearly four-fifths as wide as the prothorax, with distinct sulci; antennæ nearly similar but longer, slender, the medial joints more than twice as long as wide; prothorax broader, fully one-half wider than long, otherwise much as in *debiliceps*, though less convex as a rule; elytra similar but more elongate, somewhat more than one-half longer than wide and only two-fifths wider than the prothorax, the striæ not very fine and slightly impressed, the punctures distinct basally, rapidly disappearing behind the middle, the foveæ slightly before basal and near apical third, the third interval distinctly wider than the others. Length (♂♀) 3.0–3.7 mm.; width 1.2–1.3 mm. California (San José, Mt. Diablo and Sonoma Co.). [*Ochthedromus tessellatus* || Lec.—San Diego; *Bemb. xanthostictum* G. & H.]..... **conspersum** Chd.

Form broader and slightly larger, moderately convex, the anterior parts

alutaceous but less opaque than in *conspersum*, black, with more pronounced greenish lustre; elytra shining, maculate in nearly the same way; head three-fourths as wide as the prothorax or more, the antennæ nearly similar; prothorax larger and broader, but otherwise nearly similar, except that the sides are not quite so strongly rounded and are more reflexed; elytra even more elongate, nearly three-fifths longer than wide, more gradually rounded and less obtuse behind, the striæ similar but somewhat more impressed and with the small punctures more equal among themselves, easily traceable to the declivity and relatively less strong basally; foveæ at basal and apical third, the third interval relatively less broad as a rule. Length (♂♀) 3.0–4.0 mm.; width 1.2–1.4 mm. British Columbia (Kamloops and from an unrecorded locality).

imitator n. sp.

Form oblong-suboval, moderately convex, not very shining, black, with alutaceous greenish lustre anteriorly; elytra blackish, with fasciæ and isolated spots nearly as in *conspersum*, but rather less extensive; head three-fourths as wide as the prothorax, scarcely as wide as an elytron, with short and rather deep sulci; antennæ moderate, piceous, gradually testaceous basally, the medial joints slightly more than twice as long as wide; prothorax shorter than in the two preceding, less than a third as long as the elytra and three-fifths wider than long, the moderately rounded sides oblique but only feebly sinuate posteriorly, the angles right and sharp; impressions very feeble, the stria fine, not entire; foveæ and surrounding surface rugulose, moderate, the carina longer, oblique, strong and nearly a third the total length; elytra barely one-half longer than wide, two-fifths wider than the prothorax, parabolic behind, the parallel sides broadly arcuate, gradually rounding at the humeri; striæ rather fine, scarcely impressed, the fine punctures disappearing a little behind the middle, those of the equally deep lateral striæ continuing further posteriorly; foveæ near basal and apical third. Length (♀) 3.7–3.9 mm.; width 1.4–1.55 mm. Utah (Provo),—Wickham.

provoanum n. sp.

31—Body small in size, in this respect and in the sharply marked fasciæ of short lines, resembling the preceding species 32

Body larger, the almost wholly pale elytra with a submedian and subapical dark fascia 43

32—Form oblong, not notably ventricose 33

Form ventricose, the prothorax much narrower than the elytra, which are deficient in anterior ornamentation as a rule 41

33—Head well developed, with notably prominent eyes, as wide as an elytron or wider 34

Head noticeably small, not or scarcely as wide as an elytron 39

34—Body subparallel, the prothorax but little narrower than the elytra. Blackish, with viridi-æneous and only feebly alutaceous lustre anteriorly, the shining elytra piceous, the anterior spots obsolete in great measure, but with a yellowish posterior fascia, broadly interrupted at the suture, the under surface piceo-rufous, the legs flavo-testaceous; head nearly four-fifths as wide as the prothorax, the

sulci narrow, rather deep and sinuous; antennæ slender, fuscous, pale basally, the medial joints nearly three times as long as wide; prothorax large, nearly one-half wider than long, wider at base than at apex, the subevenly and moderately rounded sides rather broadly reflexed basally, finely so apically, slightly oblique posteriorly, becoming feebly sinuate at the right and sharp angles; anterior impression obsolete, the posterior feeble, the stria very fine; foveæ deep, linear, nearly as long as the distinct carinà; elytra fully one-half longer than wide, barely a third wider than the prothorax, parallel, gradually circularly rounded behind; striæ fine, scarcely impressed, the punctures not coarse but distinct, rather close-set, evident nearly to the declivity, those of the seventh series obsolete at about the middle; foveæ near two and four sevenths. Length (♂ ♀) 3.3–3.7 mm.; width 1.25–1.4 mm. Illinois (Highland Park). **monstratum** n. sp.

Body not subparallel, the prothorax more evidently narrower than the elytra 35

35—Antennæ long and very slender, the medial joints scarcely less than four times as long as wide. Body slightly stout, rather convex, black, with somewhat greenish alutaceous lustre anteriorly, the elytra blacker, with feebly defined, moderately pale markings, a long streak on the eighth interval, shorter spots on intervals four to seven, near basal third, sometimes obsolete, and a short external subapical fascia, the apex more indefinitely pale, the basal pale spot reduced to a very small area on the basal slope; under surface black, the legs rufous; head large, fully four-fifths as wide as the prothorax, the sulci deep; antennæ fuscous, in greater part rufous basally, as long as the elytra; prothorax one-half wider than long, the sides subprominently rounded just before the middle, straighter apically, similarly oblique basally, becoming broadly and only just visibly sinuate toward the very sharp and right angles; impressions very feeble, slightly rugulose, the stria extremely fine; foveæ large, rugulose, with a short deep linear bottom, the carina strong, a fourth the total length; elytra parallel, gradually ogival behind, two-fifths wider than the prothorax, the striæ rather coarse, not much impressed, the punctures strong and close basally, traceable to the declivity, the foveæ before basal and at apical third. Length (♂ ♀) 3.6–4.0 mm.; width 1.25–1.45 mm. Indiana . . . . . **fenisex** n. sp.

Antennæ not quite so long, the medial joints never more than three times as long as wide 36

36—Form moderately stout, slightly convex, colored nearly as in the preceding, the anterior parts less greenish and blacker; elytra generally with a small lateral fascia near basal third, and with a very small and more anterior spot on the third interval, the subapical fascia from the sides attenuated to about the second interval, usually much more conspicuous than the anterior, the apex also pale; head with rather deep straight sulci, the antennæ slender, colored as in *fenisex*, but much shorter than the elytra, the medial joints between two and three times as long as wide; prothorax one-half wider than long, the sides strongly, subevenly rounded, becoming

conspicuously sinuate basally, sometimes almost parallel for some distance before the angles; impressions smooth, the anterior scarcely traceable, the posterior distinct; foveæ short, deep, linear, the carina much longer and strong; elytra two-fifths wider than the prothorax, the striæ moderate, feebly impressed, feebler than in *fenisex* and more finely punctate, the punctures rather rapidly strong basally; foveæ at two and four sevenths. Length (♂♀) 3.8 mm.; width 1.4 mm. Rhode Island, New York and Pennsylvania to Iowa and Lake Superior..... **posticum** Hald.

Form broader, a little larger in size, similar in coloration, the anterior parts rather opaque; elytra more maculate, having on each a basal spot, a fascia on intervals five to eight near basal third, two short lines on the third interval—before and behind the fovea, a fascia near posterior third from the fourth interval to the margin, and the apex, pale; legs rufous; head not quite so large as in *fenisex*, nearly as in *posticum*, fully three-fourths as wide as the prothorax, the antennæ rather longer than in *posticum*, similarly colored, the medial joints three times as long as wide, or very nearly; prothorax narrower, two-fifths wider than long, smaller and narrower when compared with the elytra than in *posticum*, otherwise nearly similar, the sides distinctly sinuate at base; elytra broader, with finer and almost unimpressed striæ, distinctly punctate basally, one-half wider than the prothorax; foveæ fine, similarly placed. Length (♂♀) 4.0–4.25 mm.; width 1.35–1.55 mm. Indiana and Wisconsin (Bayfield). **plectile** n. sp.

Form nearly as in *posticum* but with the prothorax smaller, and differing from that or any of the three preceding in being widest near anterior third, where the sides are well rounded, thence oblique and nearly straight posteriorly, becoming just visibly and very broadly sinuate; color and maculation nearly as in *posticum*, except that there are more anterior elytral spots, these being almost exactly as in *plectile;* legs obscure rufous; head nearly four-fifths as wide as the prothorax, with very abruptly and conspicuously prominent eyes; antennæ nearly as in *posticum*, the medial joints not quite three times as long as wide; prothorax less than one-half wider than long, equally wide at base and apex, the angles slightly obtuse but sharp; margins moderately reflexed; impressions nearly obsolete, the foveæ and carina as in the preceding species; elytra in outline, strong striation and rather strong close-set punctures, almost exactly as in *fenisex*, the prothorax, however, entirely different; the elytra here are about one-half wider than the prothorax. Length (♂) 3.9 mm.; width 1.35 mm. A single specimen, without indication of locality but undoubtedly from somewhere in the Atlantic regions. . **mediocre** n. sp.

37—Antennæ longer and more slender, the medial joints between two and three times as long as wide; surface more convex. Body oblong-oval, noticeably convex, black, the anterior parts somewhat greenish and more or less alutaceous; elytra with more pallid maculation than in any of the preceding, this about equaling the black in area, the basal spot, apex and two fasciæ situated as usual, also with two elongate spots in the usual situation on the third interval; under

surface black, the legs rufous; epipleura pale; head two-thirds as wide as the prothorax, with narrow and rather deep sulci and large but only moderately prominent eyes; antennæ fuscous, in part testaceous basally; prothorax two-fifths wider than long, the sides rather strongly rounded before the middle, broadly and distinctly sinuate basally, the angles sharp, right or rather more; impressions very feeble; stria not entire and fine, but deeply and sharply impressed; foveæ large, linear at the bottom, the strong carina nearly a third the total length; elytra oblong-oval, barely one-half longer than wide, a third to two-fifths wider than the prothorax; striæ coarse, more or less impressed, the punctures close-set, rather coarse and conspicuous toward base; foveæ near basal and apical third. Length (♂ ♀) 3.4–4.2 mm.; width 1.2–1.6 mm. Pennsylvania, New York, Indiana and Iowa. [*Bemb. variegatum* Lec. nec Say].

patruele Dej.

Antennæ not so long, much shorter than the elytra, the medial joints about twice as long as wide; surface less convex, form narrower, the striæ finer and less impressed. 38

38—Form oblong, feebly convex, in color and lustre nearly as in *patruele*, but with the knees somewhat darker; elytra with the whitish maculation, covering almost as much area as the black ground, more sharply defined and with the pale lines composing the fasciæ more defined by the black striæ than usual, disposed as in *patruele;* head similar but inserted almost to the very large eyes; antennæ blackish, red toward base only on the under surface of the joints; prothorax one-half wider than long, the sides broadly, evenly rounded to a short feeble sinuation just before the sharp basal angles; impressions feeble and very indefinite, the stria extremely fine; foveæ and carina nearly as in the preceding; elytra parallel, more obtusely rounded at tip, slightly longer, two-fifths wider than the prothorax; striæ rather fine, barely at all impressed, distinctly punctate to near the apex; third interval much wider than the others, the foveæ before basal and near apical third. Length (♂) 3.6 mm.; width 1.35 mm. Wisconsin (Bayfield),—Wickham. . . . . **graphicum** n. sp.

Form less depressed and not quite so narrow, the elytra with more restricted maculation, black, shining, the head feebly alutaceous; elytra with small spots, a dash on the fifth interval at base, two small, as usual, before and behind the fovea on the third, the short anterior fascia feeble, with a long streak on the eighth interval, the posterior fascia narrow, irregularly biarcuate, the apical pale spots composed each of three dashes; head as in *graphicum* but with less prominent eyes, the antennæ similar; prothorax one-half wider than long, the evenly rounded sides less strongly arcuate, becoming very gradually and only just visibly sinuate toward the angles, which are slightly obtuse, though not rounded; surface throughout nearly as in *graphicum;* elytra shorter, barely one-half longer than wide, obliquely ogival in apical third, two-fifths wider than the prothorax, almost similarly striate and punctate, but with the third interval only

slightly wider than the others; foveæ near basal and apical third. Length (♂) 3.7 mm.; width 1.35 mm. Colorado (Boulder Co.).
retractum n. sp.

39—Sides of the prothorax deeply sinuate just before the angles, which are acute and somewhat prominent; elytral striæ strong apically as well as discally. Form rather broad and convex, black, shining, the anterior parts somewhat alutaceous and greenish; elytra with two minute spots on the third and one on the fifth interval near anterior third, each also with an oblique external fascia near apical third and the apex, indefinitely, pale; legs pale piceo-flavate; head large, with prominent eyes and rather deep sulci; extending obliquely outward behind, four-fifths as wide as the prothorax and wider than an elytron; antennæ fuscous, paler basally, slender, the medial joints nearly three times as long as wide; prothorax barely one-half wider than long, the sides subprominently rounded just before the middle, oblique posteriorly to the rather abruptly formed sinus; impressions very feeble, the stria short and fine; foveal region rugulose, the foveæ short, deep, linear, scarcely more than half as long as the strong carina; elytra nearly one-half longer than wide, a little less than one-half wider than the prothorax and obliquely ogival in apical third; striæ not very fine, deep and conspicuous but not impressed, the punctures close-set and strong basally, disappearing slightly behind the middle; foveæ near basal and apical third. Length (♂) 3.6 mm.; width 1.4 mm. Illinois (Highland Park)..... **exclusum** n. sp.

Sides of the prothorax arcuately oblique behind, becoming gradually and faintly sinuate just before the angles, which are right; striæ feebler on the declivity.....40

40—Body stout, moderately convex, subopaque anteriorly, the elytra rather shining, black, the elytra without anterior pale markings, except a nubilous streak on the eighth interval and a shorter one on the seventh, each also with a nubilous external spot near the apex, the latter also pale; legs rufous, the femora slightly infuscate, except at apex; head rather large, with prominent eyes, the sulci moderately deep; antennæ rather long, slender, blackish, rufous basally beneath, the medial joints between three and four times as long as wide; prothorax one-half wider than long, the sides somewhat evenly and strongly rounded, widest just before the middle; entire surface rather dull, the anterior impression subobsolete, the posterior distinct, the stria fine, incomplete; foveæ short, deep, the carina twice as long, strong; elytra slightly less than one-half longer than wide, nearly one-half wider than the prothorax, obtusely rounded behind; striæ fine, unimpressed, the punctures distinct basally, gradually extinct at the declivity; foveæ near basal and apical third. Length (♀) 4.2 mm.; width 1.7 mm. Missouri (St. Louis).
intermedium Kirby

Body almost similarly stout, rather convex, shining, the anterior parts alutaceous but not so dull as in the preceding; elytra each with a small basal spot, a long streak on the eighth interval, shorter ones on seven to five, forming a feeble fascia, and with a large, internally attenuate subapical fascia and a large apical area, pale; legs bright

and clear rufous throughout; head well developed, with prominent eyes, the sulci deep, oblique posteriorly; antennæ fuscous, in great part rufous basally, only moderately slender, the medial joints not quite three times as long as wide; prothorax one-half wider than long, a little less (♂), in outline nearly as in the preceding, the surface also similar, except that the foveæ and carinæ are about equal in length; elytra distinctly less than one-half longer than wide, one-half wider than the prothorax, circularly rounded behind, the striæ rather fine, barely at all impressed, gradually very distinctly punctate basally, the punctures posteriorly so fine as to be barely traceable; third interval but little wider than the others; foveæ somewhat before both basal and apical third. Length (♂ ♀) 3.6–4.0 mm.; width 1.35–1.55 mm. Rhode Island and New York (lower Hudson Valley). Three examples..... **marcidum** n. sp.

41—Form moderately stout and convex, very shining, the anterior parts metallic green and without trace of alutaceous lustre; elytra pale flavo-testaceous, with a biangulate transverse darker fascia at about the middle, and another between this and the apex, the latter fascia shorter, not extending much beyond the fourth or fifth interval; the anterior fovea lies within a small blackish spot, exterior to which there is some feeble shading, and also some around the scutellum; under surface black, the abdomen partially rufous, the legs and epipleura pale flavo-testaceous; head moderate, with rather narrow, deep sulci; antennæ long, slender, fuscous distally; prothorax one-half wider than long, the strongly and subevenly rounded sides becoming sinuate basally and subparallel for a short distance before the angles; base depressed; stria very fine; foveæ small, deep, sublinear, the carina strong and much longer; elytra one-half longer than wide and more than one-half wider than the prothorax; gradually obtusely ogival behind; striæ somewhat coarse and moderately impressed; punctures rather coarse and deep basally, traceable to the declivity, the seventh stria strong and entire, like the others; foveæ near basal and apical third. Length (♂ ♀) 4.7–5.4 mm.; width 1.8–2.1 mm. Illinois (Cairo) and Montana (Glendive),—Wickham. Five examples..... **dorsale** Say

Form stouter and more convex, much less shining, the head distinctly and the pronotum feebly alutaceous, black, with feeble viridi-æneous lustre, the elytra pale brownish, darker than in *dorsale* but with the same darker markings, except that there is scarcely any shading outside the anterior discal foveal spot or about the scutellum, the posterior fasciæ rather broader; under surface, legs and antennæ nearly similar in coloration; head larger but not as wide as an elytron, with similarly prominent eyes, the sulci broader, moderately deep; antennæ long and slender, the medial joints nearly four times as long as wide; prothorax two-fifths wider than long, the sides slightly more prominently rounded just before the middle, straighter apically, more gradually sinuate basally, even more strongly reflexed; anterior impression more evident, the base somewhat depressed and more strongly punctured; foveæ punctate, moderate, sublinear, as long as the carina, which is relatively somewhat shorter

than in *dorsale;* elytra shorter and broader, less than one-half longer than wide and fully three-fourths wider than the prothorax; striæ coarse and deeply impressed, coarsely and conspicuously punctate toward base, the punctures extinct rather before the second fovea; third interval more decidedly wider than the others; foveæ more widely separated, near basal and apical fourth. Length (♂ ♀) 4.6–5.5 mm.; width 1.8–2.2 mm. Pennsylvania (Harrisburg and Pittsburgh) and Indiana. Fifteen examples. [*Bemb. postfasciatum* Ham.].
variegatum Say

42—Sides of the prothorax oblique but not at all sinuate basally.....43
Sides of the prothorax becoming feebly, though evidently, sinuate for a very short distance before the basal angles.....44

43—Body deep black, convex, polished throughout, with feeble subæneous lustre; legs black, the coxæ piceous; head moderate, with large eyes, two-thirds as wide as the prothorax, the sulci narrow and deep, parallel, outwardly curved and extinct posteriorly; antennæ rather thick, black throughout, not three-fourths as long as the elytra, the medial joints twice as long as wide; palpi black; prothorax large, a third wider than long; base rather wider than the apex; sides very evenly and distinctly rounded, the basal angles obtuse but not rounded, the apical bluntly rounded; margins evenly and moderately reflexed; impressions subobsolete, the stria extremely fine; foveæ moderate, rather deep, finely rugulose, much longer than the carina, which is very short, fine and feeble; elytra nearly three-fifths longer than wide, parallel, circularly rounded at tip, only a third wider than the prothorax, the sides very gradually rounding basally; striæ entire, fine and rather feeble, unimpressed, the seventh evident; punctures fine and rather well separated, traceable well behind the middle; foveæ small, before basal and behind apical third. Length (♂ ♀) 4.5–5.2 mm.; width 1.6–1.9 mm. Utah (Provo),—Wickham.
obtusangulum Lec.

Body much smaller and more slender, but similar in coloration and lustre throughout, the legs differing in being piceo-rufous; head and antennæ nearly similar, the prothorax shorter and more transverse, two-fifths wider than long, otherwise as in *obtusangulum*, except that the carina at the hind angles is longer, a fourth or fifth the total length; elytra fully three-fifths longer than wide, only a fourth or fifth wider than the prothorax, more gradually rounding behind, the parallel sides broadly arcuate throughout and, medially, not so straight as in the preceding; punctures and striation nearly similar; foveæ at basal and apical fourth. Length (♂) 3.7 mm.; width 1.25 mm. Washington State.....**cornix** n. sp.

44—Body larger and stouter, subparallel, convex, black, the legs rufopiceous; surface polished throughout, with scarcely any metallic lustre above; head well developed, with deep sulci; antennæ piceous, dark rufous basally, rather thick, two-thirds as long as the elytra, the medial joints obconic, barely twice as long as wide; prothorax one-half wider than long, equally wide at base and apex, the sides subevenly and strongly rounded to the small feeble basal sinus, the angles sharp and somewhat prominent; margins not broadly

but strongly reflexed; base arcuate; impressions vague and subobsolete, the stria somewhat deeply impressed, not entire; foveæ very large, shallow and densely rugose, without a deeper sublineate central part, the carina distinct, nearly a fifth the total length; elytra more than one-half longer than wide, rather abruptly, obtusely rounded at apex, parallel, with nearly straight sides, somewhat rapidly rounding basally, not a third wider than the prothorax; striæ only moderately fine, very feebly impressed; punctures moderate, subeven and extending almost to the apex; foveæ behind basal and near apical fourth, the third interval not noticeably wider than the others. Length (♂) 4.7–4.8 mm.; width 1.8 mm. Utah (Provo—Wickham; also from an unrecorded locality).....**mormon** Hayw.

Body smaller and notably more slender, polished, black, with rather brilliant subæneous lustre; legs dark rufous; head well developed, with moderate, prominent eyes and short deep sulci, the posterior oblique part of which is obsolete; antennæ rather short, piceous, gradually rufous basally, the medial joints twice as long as wide; prothorax nearly one-half wider than long, widest but little before the middle, scarcely as wide at base as at apex, the sides strongly, subevenly rounded to the extremely minute and feeble sinus at the subprominent and sharp angles, the apical obtuse but only slightly blunt; impressions subobsolete, the stria distinct, nearly entire; foveæ but feebly rugulose, shallow, with the usual short deep sublinear median part, the carina distinct, a sixth the total length; elytra one-half longer than wide, two-fifths wider than the prothorax, parallel and but just visibly arcuate at the sides, the latter rather rapidly rounding basally, the apex rapidly ogival; striæ entire, rather strong but not impressed, rapidly very fine posteriorly, the punctures somewhat strong, gradually obsolescent posteriorly; third interval distinctly wider than the others; foveæ before basal and behind apical third. Length (♀) 4.2–4.65 mm.; width 1.45–1.7 mm. Arizona (Tucson). Three examples taken by the writer.....**callens** n. sp.

Body still smaller and more slender, not quite so convex, polished, black, the elytra with a feeble piceous tinge; epipleura and legs piceo-rufous; head much smaller than in any of the preceding, two-thirds as wide as the prothorax and narrower than an elytron, the sulci deeply impressed, without posterior oblique part; eyes less prominent; antennæ longer and more slender, almost as long as the elytra, piceous, clearer basally, the medial joints between two and three times as long as wide; prothorax less than a third wider than long, widest but little before the middle, where the sides become strongly and more subprominently rounded, arcuate throughout to the minute basal sinus, the angles slightly obtuse but sharp; base and apex equal, about three-fourths the maximum width; surface with some feeble wavy rugulation basally, the anterior impression obsolete, the posterior not strong but evident; foveæ large, shallow and slightly rugose, with a very short deep part at base; carina very short and fine; elytra more than one-half longer than wide, fully two-fifths wider than the prothorax, parallel, circularly rounded behind; striæ rather deep and subequal throughout, not impressed, the punctures distinct almost to the

apex; third interval barely at all widened, the foveæ near basal and apical third. Length (♂) 4.0 mm.; width 1.33 mm. Utah (Provo) —Wickham..... **fidele** n. sp.

45—Form stout, oblong, moderately convex, very small in size and shining throughout, piceous-black, the elytra piceous, nubilously pale at base, along the sides basally and more distinctly at apex, also with a small marginal pale spot near the apex, connected along the margin with the apical pale area; epipleura pallescent, the legs piceo-rufous; head moderate, the head, prothorax and elytra increasing regularly in width, the sulci rather deep, parallel; eyes only moderately prominent; antennæ rather short and thick, fuscous, paler basally, the medial joints nearly twice as long as wide; prothorax broad, fully one-half wider than long, widest near apical third, the sides there strongly rounded, oblique and nearly straight in more than basal half, the margins moderately reflexed; angles sharp, only slightly obtuse; base broad and subtruncate; anterior impression very feeble, the basal distinct, nearly smooth; foveæ rather deep, linear, almost as long as the distinct carina; elytra short, oblong, only a third longer than wide and a third wider than the prothorax, wider posteriorly than at base, obtusely subcircular at apex, the sides broadly arcuate, gradually rounding at the humeri, which are but narrowly exposed at base; striæ slightly abbreviated, rather coarse and impressed suturally, but fine and wholly unimpressed laterally; punctures fine externally, strong suturally; foveæ near two and four sevenths. Length (♂) 2.7 mm.; width 1.15 mm. California (Truckee). A single example, taken by the writer.
novellum n. sp.

46—Species very small, resembling *vile*, but with more transverse prothorax; basal transverse impression of the latter having a series of very coarse punctures.....47

Species not so minute, the posterior pronotal impression without an evident series of punctures.....48

47—Body rather narrowly suboval, convex, polished, black throughout; legs black, the coxæ piceous; head fully four-fifths as wide as the prothorax and wider than an elytron, the eyes notably prominent; sulci parallel and rather deep; antennæ not very stout, rather short, piceous-black, the medial joints barely twice as long as wide; prothorax about one-half wider than long, narrower at base than at apex, widest at anterior two-fifths, where the sides are strongly and somewhat subprominently rounded, very strongly, arcuately converging thence posteriorly, becoming subparallel and nearly straight in basal fifth; margins very moderately reflexed; anterior impression obsolete, the posterior distinct except at the middle; stria very fine, not entire; foveæ small, oval, smooth, very deep and adjoining the carina, which is strong and a fifth the entire length; elytra more than one-half longer than wide, about one-half wider than the prothorax, parallel, oblong-oval, with broadly arcuate sides; striæ rather coarse, feebly impressed, strongly and rather closely punctate, abbreviated only on the declivity; seventh stria fine, unimpressed, ex-

tending slightly behind the middle, the eighth extremely close to the margin as usual in this section; foveæ small, near basal fourth and apical third. Length (♀) 2.7 mm.; width 1.0 mm. Nevada (Reno)..... **parabile** n. sp.

Body as in the preceding but still smaller and narrower, polished, black, the legs piceous, the femora in great part blackish; head similar; antennæ still shorter and somewhat thicker, the medial joints evidently less than twice as long as wide; palpi similarly black; prothorax less transverse, a third wider than long, widest nearer apical third, the sides strongly, more evenly rounded anteriorly, not so strongly converging to the parallel basal part; surface similar; elytra not over one-half longer than wide, fully one-half wider than the prothorax, more gradually ogival behind, the parallel sides feebly arcuate; striæ similar but finer, less impressed and with the somewhat smaller punctures more widely separated; foveæ similarly placed but smaller. Length (♂♀) 2.4–2.6 mm.; width 0.8–0.9 mm. Utah (Provo),—Wickham..... **diligens** n. sp.

48—Prothorax widest near apical third, the sides subevenly and strongly rounded anteriorly, becoming oblique in fully basal half, subparallel and straight in basal sixth. Body deep black, with very shining cupreo-æneous lustre above; legs piceous-black, the coxæ and trochanters piceo-rufous; head scarcely three-fourths as wide as the prothorax, as wide as an elytron, the sulci short, narrow and deep; eyes moderately prominent; palpi black; antennæ black, longer than in the preceding two species, very nearly as long as the elytra, the medial joints somewhat more than twice as long as wide; prothorax nearly one-half wider than long; base barely visibly narrower than the apex, both transverse; impressions extremely feeble, the stria very fine, slightly biabbreviated; foveæ nearly smooth, broader than in the two preceding, deep and adjoining the distinct carina; elytra oblong-oval, more than one-half longer than wide, only two-fifths wider than the prothorax, the sides parallel, distinctly arcuate; striæ fine, obsolete behind about the middle, not evidently impressed, the punctures very fine and widely separated even suturally; foveæ fine, near two and four sevenths; seventh stria only visible in basal third. Length (♂) 3.2 mm.; width 1.2 mm. Idaho (Cœur d'Alene), —Wickham..... **aleneanum** n. sp.

Prothorax widest only slightly before the middle, the sides broadly, subevenly rounded from apex to the short subparallel basal part....49

49—Prothorax relatively larger, its widest part about as wide as the elytral base. Form not very broad, convex, black and polished, with faint æneous lustre above, the legs pale piceo-rufous throughout; head moderate, with large though only moderately prominent eyes, the sulci somewhat short and narrow; antennæ black, rather heavy, though almost as long as the elytra, the medial joints obconic and distinctly more than twice as long as wide; prothorax large, one-half wider than long, evidently narrower at base than apex, the sides strongly rounded, subparallel for only a short distance before the basal angles; anterior impression obsolete, the subbasal evident, the stria very fine; foveæ small, deep, linear, isolated from the dis-

tinct carina; elytra one-half longer than wide, wider posteriorly than at base, the sides only just visibly arcuate, rapidly rounding at the humeri, parabolic in apical third, barely a third wider than the prothorax; striæ fine, unimpressed, gradually attenuate and obsolete scarcely behind the middle, the punctures very fine and remotely separated throughout; foveæ extremely small, before basal and behind apical third. Length (♀) 3.3 mm.; width 1.2 mm. Colorado (Boulder Co.). Mrs. T. L. Casey. Two examples.

perturbatum n. sp.

Prothorax relatively smaller, at its widest part narrower than the elytral base 50

50—Form oblong, moderately convex, very highly polished, black, without decided metallic lustre; legs piceous; head very moderate, not three-fourths as wide as the prothorax and not quite as wide as an elytron, the eyes only moderately prominent; sulci narrow, parallel; antennæ black, thick and short, two-thirds as long as the elytra, the medial joints evidently less than twice as long as wide; prothorax barely two-fifths wider than long, distinctly narrower at base than at apex, the sides rather strongly and evenly rounded to the straight parallel basal part, which is nearly a fifth the total length; anterior impression feeble, the posterior wide but evident, more or less feebly and remotely punctulate, the stria very fine; foveæ punctate, broadly and irregularly impressed, the carina strong and distinct; elytra fully one-half longer than wide, parallel, with feebly arcuate sides, gradually parabolic behind, nearly one-half wider than the prothorax; striæ very fine, unimpressed, obsolete barely behind the middle, the punctures very fine and remotely separated throughout, somewhat less remote but not larger in the sutural series; foveæ very small, near basal and apical two-sevenths. Length (♂♀) 3.35–3.5 mm.; width 1.3–1.35 mm. Idaho (Cœur d'Alene),—Lt. Jas. A. Leyden.

agitabile n. sp.

Form, coloration and lustre nearly as in *agitabile*, similarly convex and highly polished, having a very faint subæneous lustre; legs piceo-rufous, the femora darker; head larger, with larger though only slightly more prominent eyes, more than three-fourths as wide as the prothorax and rather wider than an elytron, the antennæ black, longer, the medial joints fully twice as long as wide; prothorax fully two-fifths wider than long, but little narrower at base than at apex, the sides regularly and strongly arcuate, becoming more briefly subparallel at base; surface nearly similar, the foveæ smaller, very deep, better defined, oval, separated from the distinct carina; elytra similar but only about two-fifths wider than the prothorax, the similarly very fine and unimpressed striæ continuing rather more evidently behind the middle and with the punctures, though fine, more distinct than in *agitabile* and somewhat less widely separated; foveæ extremely small, before basal and near apical third. Length (♂) 3.6 mm.; width 1.35 mm. Oregon (Bull Run, Clackamas Co.),—Mrs. Kermack ..... **atrolucens** n. sp.

51—Form rather narrow, strongly convex, polished throughout, black, with æneous lustre anteriorly, the under surface piceo-rufous and

the legs testaceous; elytra in great part rufous, black irregularly along the suture and blackish along the external margin, also around the anterior fovea; at apical third there is on each a large external spot more flavate and extending to the second stria, bordered anteriorly with a black fascia involving the suture, the apex largely subflavate and united laterally with the external spot; darker areas submetallic; head large, very nearly as wide as the prothorax and wider than an elytron, with very prominent eyes, the sulci long, wide, deep and parallel, extending through the epistoma and ending behind the middle of the eyes; antennæ long, slender, in great part pale, the third joint fully three times as long as wide; prothorax only a fourth or fifth wider than long, widest near apical third; base much narrower than the apex; sides strongly, subevenly rounded anteriorly, oblique and nearly straight behind, almost imperceptibly sinuate near the obtuse but sharp angles; margins not broadly but strongly reflexed; anterior impression obsolete, the posterior feeble, the stria extremely fine; surface very smooth throughout, the foveæ small, deep, oval, very smooth and adjoining the very moderate carina; elytra parallel, with barely arcuate sides, rapidly rounding at the humeri, gradually parabolic behind, one-half longer than wide, one-half wider than the prothorax; striæ feebly impressed, coarse, not quite entire, punctures very coarse, deep, separated by their own diameters, those of the seventh as coarse as the others and extending scarcely beyond the middle, those of the other striæ abruptly wanting in apical third; foveæ near basal and apical third. Length (♀) 4.0 mm.; width 1.45 mm. Arizona (southern). [*Bemb. scintillans* Hayw., nec Bates.]. . . . . **vinnulum** Csy.

Form nearly similar but not quite so convex, highly polished throughout and deep black, with but little or no metallic lustre, the elytra each with an extremely faint small external spot posteriorly, the apex also nubilously and faintly pallid; under surface black, the legs dark rufous, the femora piceous; head four-fifths as wide as the prothorax, wider than an elytron, with prominent eyes and well developed deep sulci; antennæ thicker, black, piceous basally, the third joint more obconic, two and one-half times as long as wide; prothorax a fourth wider than long, barely visibly narrower at base than at apex, widest at anterior two-fifths, the sides broadly and less strongly arcuate, becoming deeply sinuate just before the angles, which are prominent, right and very sharp, the base oblique laterally; margins finely reflexed; surface nearly as in the preceding, the very smooth foveæ less deep, longer and more linear, adjoining the distinct carina; elytra one-half longer than wide and one-half wider than the prothorax, parallel, gradually parabolic behind; striæ rather fine, not quite entire, not distinctly impressed, the punctures rather small and close-set, not comparable in any way with those of *vinnulum* and traceable to the extreme ends of the striæ; oblique terminal groove of the seventh stria unusually long; foveæ near two and four sevenths. Length (♀) 4.0 mm.; width 1.5 mm. Arizona (Tucson). A single example, taken by the writer. . . . . **definitum** n. sp.

52—Prothorax not or very indistinctly narrower at base than at apex,

but with a general habitus allying the species with *constrictum*, rather than *patruele* 53

Prothorax always very much narrower at base than at apex 54

53—Body moderately stout, rather convex, shining, the head very feebly alutaceous; color black, sometimes with feeble æneous lustre, the elytra piceous, broadly, nubilously rufescent basally, except a dark spot around the anterior fovea, also with a broad and feeble, extremely nubilous fascia near apical third, the apex pallescent; under surface black, the epipleura partially pale, the legs bright rufous; head well developed, fully three-fourths as wide as the prothorax, with large prominent eyes, the sulci long, broad and rather deep; antennæ long, slender, fuscous, pallescent basally, the medial joints between three and four times as long as wide; prothorax two-fifths wider than long, widest slightly before the middle, the sides strongly rounded, straighter apically, strongly oblique posteriorly, becoming deeply sinuate before the angles, being parallel in about basal seventh or eighth, the margins widely and peculiarly strongly, conspicuously reflexed; base equal to the apex, both almost truncate; impressions shallow and very feeble; foveæ long, deep and linear, the carina long and strong; elytra one-half longer than wide, two-fifths wider than the prothorax, parallel, the striæ entire, scarcely impressed, rather coarse, fine apically, the punctures strong, disappearing at about apical third; seventh series distinct; foveæ near basal fourth and apical third. Length (♂♀) 4.8–5.0 mm.; width 1.8 mm. Massachusetts (Framingham—Frost) and Michigan. [*Bemb. dentellum* Hayw. nec Thun.] ..... **arcuatum** Lec.

A—Similar to the preceding but evidently narrower, the prothorax less transverse, the base only apparently narrower than the apex but actually equal, the elytra similar in every way, excepting that they are more elongate, three-fifths longer than wide, two-fifths wider than the prothorax. Length (♂) 4.5 mm.; width 1.6 mm. Maine (Wales—Frost). A single specimen sent to me as identified by Mr. Hayward under the name *graciliforme*.

graciliforme Hayw.

Body more oblong, moderately convex, black, the anterior parts strongly, the elytra feebly, alutaceous, the elytra each with a large basal pale spot, two fine and feeble on the third interval before and behind the anterior fovea and one on the fifth opposite the fovea, a longer dash at the middle of the eighth interval, a posterior fascia from the margin to the fifth interval and a large apical area, also pale, the pale spots composed of separated lines as in *patruele;* legs rufous, the femora partially piceous; head large, with very prominent eyes, four-fifths as wide as the prothorax, the sulci broad and shallow; antennæ fuscous, paler basally, except a dorsal black streak, the medial joints between two and three times as long as wide; prothorax nearly one-half wider than long, the base and apex equal; sides rather widely and strongly reflexed, broadly rounded, becoming broadly and almost imperceptibly sinuate basally, the angles obtuse but not rounded; anterior impression subobsolete, the posterior broad but evident; stria not entire, very fine; foveæ deep, elongate-oval,

slightly scabrous, remote from the carina, which is moderate though distinct; elytra oblong, with arcuate sides, barely one-half longer than wide, hardly one-half wider than the prothorax; striæ entire, very fine, scarcely at all impressed, the punctures very fine, barely traceable to about apical third, the seventh series similar to the others; foveæ strongly asperate, rather before basal and at apical third. Length (♀) 4.0 mm.; width 1.65 mm. Arizona (Tucson). A single example, taken by the writer. . . . . **lassulum** n. sp.

54—Larger species, the sharply marked pale elytral maculation forming an oblong and externally open ring about the humeri, more or less expanding toward the margin near basal third—the ring apparently incomplete basally in *cordatum*—and also with a posterior narrow fascia and the apex pale 55

Smaller species, the elytral maculation of the *patruele* order 56

Smaller and more elongate species, with the elytral maculation almost entirely confined to posterior third, rarely in great part wanting. . 57

55—Form very stout, only slightly convex, black, with greenish lustre above, excepting the pale elytral maculation, shining, the elytra more or less alutaceous; under surface black, the legs obscure rufous; head large, with prominent eyes, almost four-fifths as wide as the prothorax, the sulci broad, rather shallow; antennæ only two-thirds as long as the elytra, thick, blackish throughout, the medial joints barely twice as long as wide; prothorax short, nearly three-fifths wider than long, the sides very strongly rounded, well reflexed, very oblique behind, rapidly sinuate basally, parallel for a short distance in front of the sharp angles; surface shining but rugulose basally and densely scabrous postero-laterad, the impressions distinct; foveæ large and shallow, with a small and slightly deeper median linear part, the carina not very long but distinct; elytra broad, not one-half longer than wide, nearly one-half wider than the prothorax, parallel, with broadly arcuate sides, rapidly very obtuse behind; striæ entire, fine, not impressed, rather finely but strongly, somewhat closely punctate, the small foveæ slightly before the middle and near apical fourth. Length (♂♀) 5.8–6.5 mm.; width 2.4–2.6 mm. California (San Diego, Los Angeles and Alameda). . . **insulatum** Lec.

Form not so broad and rather more convex, shining, the elytra slightly alutaceous, black, with feeble subæneous lustre, the pale maculation as described above normally, but sometimes almost wholly wanting, excepting the basal and apical areas; under surface black, the legs piceous; head large, with prominent eyes and wide, somewhat shallowly impressed sulci; antennæ as in *insulatum* but not quite so thick, black as a rule, or each joint may be rufescent basally, the medial joints slightly more than twice as long as wide; prothorax less transverse and not quite so strongly rounded at the sides, but otherwise nearly as in the preceding, except that the foveæ are rather shallow and very irregularly impressed, without deep linear part, the carina rather long and strong; elytra much less broad, slightly more than one-half longer than wide, more strongly rounded behind, parallel and broadly arcuate at the sides, scarcely a third wider than the prothorax, the striæ rather fine, not impressed, with small but dis-

tinct punctures, very gradually extinct posteriorly, the foveæ slightly before basal and behind apical third. Length (♂ ♀) 5.5–5.8 mm.; width 2.1–2.25 mm. Arizona (Douglas),—F. H. Snow.

caliginosum n. sp.

Form still narrower than in *caliginosum* and smaller in size, moderately convex, dull in lustre, viridi-æneous, the elytra slightly alutaceous, black, the pale markings broad and very complete, the internal ring about the humeri complete from base to external margin, very broad along the eighth interval, the black line at the anterior fovea well developed; posterior fascia slender internally, scarcely attaining the suture, broadly united externally with the large apical pale area; under surface shining, black, with greenish lustre, the abdomen in part rufescent, the legs, hypomera and epipleura very pale; head large, with very prominent eyes, but little narrower than the prothorax and much wider than an elytron, the sulci very shallow, slightly oblique; antennæ slender, fuscous, pale basally, the medial joints about three times as long as wide; prothorax four-sevenths wider than long, strongly rounded at the sides, oblique and less so posteriorly to a short sinus before the right angles; impressions very faint and broad, the short stria extremely fine; foveæ small, rather shallow, next to the short feeble carina; base fully two-thirds the maximum width; elytra three-fifths longer than wide, three-sevenths wider than the prothorax, parallel, with broadly arcuate sides; striæ entire, moderately strong, unimpressed, the punctures not coarse but conspicuous and close-set, obsolete toward posterior third; foveæ before basal and behind apical third. Length (♂ ♀) 5.0–5.2 mm.; width 1.8–2.0 mm. Western Texas (Big Springs),—Wickham. Three specimens. . . . . **placabile** n. sp.

Form much depressed æneous, not very shining; head broad, the sulci not deep, slightly oblique; antennæ slightly longer than the head and prothorax, fuscous, rufo-testaceous at base; prothorax slightly wider than the head, almost twice as wide as long, truncate at apex and base; sides strongly rounded, strongly retracted behind and briefly sinuate, the hind angles right, not rounded; base scarcely more than half the maximum width; surface almost flat, the stria fine, biabbreviated; impressions indistinct; foveæ small, the carina distinct; elytra but slightly wider than the prothorax, flat; striæ before the middle finely punctate; intervals flat, with two pale fasciæ, the oblique fascia before the middle extending to the second stria, bifurcate internally—the ends of the bifurcation evidently the small spots before and behind the anterior fovea, noticeable in maculation of the *patruele* type—broad toward the margin, the angulate fascia near apical third extending inwardly to the third stria, the internal part sometimes rather indistinct; apex broadly and obscurely testaceous; margin anteriorly æneous, beneath black, the epipleura and legs testaceous. Length 6.25 mm. New York. Description drawn from the original. . . . . **cordatum** Lec.

56—Body stout, oblong-suboval, slightly convex, viridi-æneous and rather dull anteriorly; elytra shining, black; pale lines of the fasciæ separated by the black striæ, the entire eighth interval pale, except at

base; intervals seven to four with the lines gradually decreasing, the fourth also at base and the fifth with a longer basal line; posteriorly, there is a short broad external fascia and a pale apical area; under surface piceo-rufous, the legs pale flavo-testaceous; head smaller than in the preceding subsection; three-fourths as wide as the prothorax and as wide as an elytron, the eyes prominent; sulci moderately narrow, deeper than in the preceding; antennæ not very slender, fusco-testaceous, the medial joints between two and three times as long as wide; prothorax nearly one-half wider than long, almost imperceptibly narrower at base than at apex (♀) or distinctly so (♂), the sides subevenly and rather strongly rounded to the short subparallel basal part, the angles right; margins broadly and conspicuously reflexed, especially in the male; impressions very feeble, the stria extremely fine; foveæ rather deep, sublinearly impressed, the carina subequally long, distinct; elytra not quite one-half longer than wide, parallel, obtuse at apex, a little less than one-half wider than the prothorax, the striæ rather fine, unimpressed, the punctures distinct basally but traceable barely to the middle as a rule, the foveæ near basal and apical third (♀) or more approximate (♂). Length (♂ ♀) 4.1–4.6 mm.; width 1.7–1.85 mm. California (Yuma Reservation on the Colorado River). [*Ochthedromus laticollis* || Lec.; *Bemb. platyderum* || G. & H.]..... **nubiculosum** Chd.

A—Similar to the preceding but rather more elongate, the frontal sulci a little broader and shallower, the prothorax relatively somewhat larger, though otherwise similar, the elytra fully one-half longer than wide, with the strial punctures still more distinct anteriorly and easily traceable to the summit of the declivity. Length (♂ ♀) 4.0–4.75 mm.; width 1.6–1.8 mm. A considerable series, said by Mr. Dunn to have been taken at El Paso, Texas. **daphnis** n. subsp.

Body oblong-suboval, moderately convex, viridi-æneous and dull anteriorly, the elytra more shining, the pale lines strongly separated by the black striæ, having an anterior fascia, very broad at the margin, extending upon the fourth interval, the third with a line behind the anterior fovea and a long one before, extending to the base, the fourth and fifth also pale at base; near posterior third there is an irregular oblique fascia, extending to the third stria, broadly united externally with the large apical pale area; under surface piceous, the legs pale; head large, but little narrower than the prothorax, wider than the apex of the latter, with very prominent eyes, the sulci subparallel, broad and shallow; antennæ rather long, slender, fuscous, paler basally, the medial joints three times as long as wide; prothorax much smaller than in the preceding, one-half wider than long, the sides rather strongly, subevenly rounded to a short deep sinus at base, only moderately reflexed, the angles right; impressions subobsolete, the stria extremely fine; foveæ moderate, deeply impressed and sublinear, the carina strong, longer than the foveæ; elytra parallel, rather more than one-half longer than wide, almost one-half wider than the prothorax, very obtusely rounded at apex, the sides rapidly rounding at the humeri; striæ entire, rather coarse through-

out, not definitely impressed, the punctures distinct, traceable to the declivity; apical groove of the seventh stria long and strong; foveæ approximate; near three and four sevenths. Length (♂♀) 4.0–4.7 mm.; width 1.5–1.75 mm. Texas (Brownsville),—Wickham..... **amnicum** n. sp.

Body oblong-suboval, still more convex, shining, black, alutaceous and feebly viridate anteriorly; elytra each with a small pale spot at base, a slender external fascia near basal third, extending to the fourth stria, the line on the eighth interval long, also with a small external fascia at posterior third, broadly united with the large apical pale area; under surface black, the abdomen rufous about the external limb, the legs, hypomera and epipleura pale; head moderate, scarcely more than three-fourths as wide as the prothorax and as wide as the thoracic apex, the sulci parallel, moderately broad and rather deep, the eyes rather prominent; antennæ moderately long, fuscous, paler basally, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long, the finely reflexed sides subevenly and strongly rounded to a short and very feeble sinus at the angles, which are sharp and minutely prominent, scarcely more than right, the base notably arcuate, nearly three-fourths the maximum width; impressions very feeble, the stria extremely fine; foveæ small, moderately impressed, linear, the carina short and fine; elytra one-half longer than wide, almost one-half wider than the prothorax, gradually parabolic behind, the parallel sides broadly arcuate; striæ entire, strong, feebly impressed, but becoming very fine on the declivity; punctures basally rather coarse and perforate; foveæ at two and four sevenths; apical groove of the seventh stria short, bearing a single puncture. Length (♀) 4.5 mm.; width 1.8 mm. Texas (without more definite locality)..... **festinans** n. sp.

57—Elytral striæ obsolete at tip..... 58

Elytral striæ entire, sharply marked at apex, though fine..... 65

58—The striæ obsolete in apical third or fourth of the length..... 59

The striæ obsolete only at the apex..... 60

59—Form moderately stout, strongly convex, polished, black, the head not definitely alutaceous; elytra vaguely picescent at tip, the marginal spot near the apex scarcely traceable in strong light; under surface black, the abdomen dull rufous; legs uniform rufous; head well developed, nearly four-fifths as wide as the prothorax, with only moderately prominent eyes, the sulci rather narrow and deep; antennæ somewhat slender, fuscous, clearer at base, the medial joints scarcely three times as long as wide; prothorax about a third wider than long, the sides evenly and strongly rounded, becoming very feebly sinuate only at the angles, which are not prominent, widest barely before the middle, the margins moderately reflexed; base three-fifths the maximum width; anterior impression subobsolete, the posterior feebly evident, except medially, the stria extremely fine; foveæ small, rather deep, narrow and linear, the carina obsolete; elytra oblong, parallel, one-half longer than wide, three-sevenths wider than the prothorax, circularly rounded at apex; striæ rather coarse, feebly impressed, obsolete at apical fourth, the seventh at

four-sevenths; punctures coarse and deep; foveæ strong, near basal and apical third. Length (♀) 4.7 mm.; width 1.8 mm. Florida (Lake Worth).....**prosperum** n. sp.

Form somewhat similar but narrower, convex, shining throughout, deep black, the elytra with apex and external subapical spot feebly pallid, these areas not at all well defined; under surface piceous-black, the abdomen pale rufous; legs similarly rufous; head rather small, three-fourths as wide as the prothorax, much narrower than an elytron, the sulci narrow and rather deep; eyes not very prominent; antennæ slender, fuscous, pale basally, the medial joints nearly three times as long as wide; prothorax small, similar in general form and surface to that of *prosperum*, but only a fourth wider than long, widest near anterior two-fifths, with the arcuate sides less arcuate and oblique for a longer distance posteriorly, the base four-sevenths the maximum width; elytra similar but narrower, the similarly punctured striæ obsolete in nearly apical third; foveæ near two and four sevenths. Length (♂) 4.4 mm.; width 1.6 mm. Florida (Indian River),—J. F. Kemp.....**luculentum** n. sp.

Form more slender, strongly convex, very shining, deep greenish-black, the head barely perceptibly alutaceous; elytra without trace of paler marking, except at the sides near the apex, where there is a minute and excessively feeble trace of a spot, only visible in strong light, the extreme tip also very faintly paler; under surface black, the abdomen very obscure rufous, the legs testaceous; head four-fifths as wide as the prothorax but not as wide as an elytron, the sulci not very broad and rather deep; antennæ moderately long, three-fourths as long as the elytra, fusco-testaceous, the medial joints not quite three times as long as wide; prothorax small, convex and polished, about a third wider than long, very much narrowed at base, widest but just before the middle, the sides strongly rounded to the angles, not sinuate before the latter, which are minutely prominent; base with a few punctures and but little more than half the maximum width; impressions subobsolete, the stria very fine; foveæ small, deep, elongate-oval, the carina obsolete or virtually so; elytra three-fifths longer than wide, oblong-oval, very gradually narrowly parabolic behind, two-fifths wider than the prothorax; striæ not very fine, unimpressed, obsolete near apical fourth, the punctures rather strong and notably well separated; foveæ before basal and near apical third. Length (♂♀) 4.2–4.6 mm.; width 1.45–1.6 mm. New Jersey (Cape May). Five specimens.....**vividum** Csy.

6o—Prothorax narrow, but little wider than an elytron, the base barely perceptibly narrower than the apex. Body black, alutaceous anteriorly, the elytra very shining, with a small pale spot on each on the basal declivity, a long feeble streak on the eighth interval and a moderate external subapical spot, broadly united along the margin with the apical pale area; inflexed sides rufescent, the under surface black, the abdomen partially dull rufous; legs very pale flavo-testaceous; head small, though more than three-fourths as wide as the prothorax, much narrower than an elytron, the sulci parallel, rather deep; antennæ fuscous, pale basally, the medial joints less

than three times as long as wide; prothorax scarcely a third wider than long, widest barely before the middle, the sides broadly and very moderately rounded to the abrupt deep sinus just before the right and rather prominent angles, the base decidedly arcuate; impressions subobsolete, the short stria extremely fine; foveæ small, rather deep, linear, separated from the short fine carina; elytra oblong, parallel, one-half longer than wide, fully three-fourths wider than the prothorax; striæ moderate, not obviously impressed, the punctures distinct to the declivity; foveæ at two-sevenths and two-thirds. Length (♂) 3.8 mm.; width 1.6 mm. Rhode Island (Boston Neck) ..... **argutum** n. sp.

Prothorax always much wider than an elytron, the base distinctly narrower than the apex.....61

61—Form peculiarly elongate and subparallel, brownish-black, the prothorax unusually large, sometimes but little narrower than the elytra. Upper surface with more or less æneous lustre, shining, the head alutaceous; elytra with the tip and sometimes an external connected subapical spot, both very nubilous and feebly defined, pale; under surface piceo-rufous, the abdomen clearer rufous, the legs very pale; head well developed, four-fifths as wide as the prothorax, wider than an elytron, with very moderate eyes and short broad shallow sulci; antennæ fuscous, clearer basally, the medial joints not quite three times as long as wide; prothorax two-fifths wider than long; base only four-sevenths the maximum width, the sides moderately reflexed, subevenly and strongly rounded to a very short parallel part just at the right angles; impressions subobsolete, the short stria very fine; foveæ very small, rather deep, lineato-oval, separated from the very short feeble carina; elytra parallel, with broadly arcuate sides and circular tip, very long, at least three-fourths longer than wide, not over a third wider than the prothorax, the striæ rather strong, feebly impressed, subequally distinct nearly to their point of disappearance at the summit of the short declivity, with the moderate punctures even and distinct almost throughout their length; foveæ more or less near basal and apical third. Length (♂ ♀) 4.6–5.1 mm.; width 1.55–1.7 mm. New York (Long Island) and New Jersey. Twelve examples..... **contractum** Say

Form always much less elongate and rather more convex, or more ventricose, the prothorax in all cases much narrower than the elytra; color invariably black, with more or less feeble metallic lustre as a rule.....62

62—Head well developed, as wide as an elytron and with notably prominent eyes.....63

Head small, with only moderately prominent eyes, always distinctly narrower than an elytron.....64

63—Body rather stout and convex, shining, greenish-black, the anterior parts alutaceous; elytra with a distinctly defined marginal subapical pale spot, broadly connected with the distinct pale apex, sometimes also with a short external irregular fascia near basal third, which is however extremely indistinct; head over three-fourths as wide as the prothorax, the sulci rather wide, not very deep; antennæ fusco-

testaceous, moderate, the medial joints two and one-half times as long as wide; prothorax widest but slightly before the middle, the sides strongly, subprominently rounded, less arcuate anteriorly and posteriorly, becoming sinuate only slightly before the hind angles, which are right; base two-thirds the maximum width; impressions subobsolete, the stria very fine; foveæ small, deep, linear, separated from the very short fine carina; elytra oblong, gradually rounded behind, slightly more than one-half longer than wide, two-fifths wider than the prothorax, the striæ not fine, scarcely at all impressed, the distinct and close-set punctures continuing to about apical third; foveæ near basal and apical third. Length (♂♀) 4.5–4.7 mm.; width 1.7–1.75 mm. New Jersey to Texas (Galveston).

constrictum Lec.

A—Similar to *constrictum* but stouter, the prothorax broader and still more strongly rounded at the sides but in similar manner, except that basally they become only just visibly sinuate at the hind angles, which are obtuse, with the apex minutely and feebly prominent; elytra uniformly deep black, excepting the pale areas, which are as in *constrictum*. Length (♀) 5.0 mm.; width 1.9 mm. New Jersey..... **vernula** Csy.

B—Similar to *constrictum* but narrower, the eyes not quite so large but more prominent, the prothorax shorter, one-half wider than long, widest rather more anteriorly and with more evenly rounded sides, similar at the angles; foveæ longer, feebler and more irregularly impressed; elytra similar but narrower, the foveæ nearer two and four sevenths, the lustre rather more æneous. Length (♀) 4.4 mm.; width 1.65 mm. Texas (Brownsville),—Wickham..... **civile** n. subsp.

Body larger and more elongate, similar in coloration and lustre, the abdomen rufous only at tip and the legs darker rufous; head not over three-fourths as wide as the prothorax, the sulci rather broad and shallow; antennæ fusco-testaceous, not much over two-thirds as long as the elytra, the medial joints as in *constrictum;* prothorax not quite one-half wider than long, the sides more evenly rounded to the short parallel basal part, the angles right and sharp, the base oblique at the sides, barely two-thirds the maximum width; surface and foveæ nearly as in *constrictum*, the carina fine but distinct; elytra parallel, very gradually parabolic behind, almost three-fifths longer than wide, colored as in *constrictum*, the lateral fascia near basal third extremely faint and nubilous, the posterior marking distinct; striæ rather fine, scarcely impressed, obsolescent well before the tip, the punctures rather small and well separated, except in the two inner series, the foveæ near basal and apical third. Length (♀) 5.5 mm.; width 2.0 mm. Arizona (probably southern).

particeps n. sp.

64—Form elongate-oval, rather convex and shining, the anterior parts slightly alutaceous, black, often with feeble æneous lustre; elytra with the pale apex and external small connected spot feebly defined and rather faint; eighth interval with a long and very faint submedian streak; under surface black, the abdomen obscure rufous, the legs

very pale; head more than three-fourths as wide as the prothorax but not as wide as an elytron, the sulci narrow and sharply impressed, rather deep; antennæ fusco-testaceous, the middle joints as in *constrictum;* prothorax much smaller, the sides more evenly rounded to the very small distinct basal sinus, the angles right, prominent and sharp, the base arcuate, nearly three-fourths the maximum width; surface nearly as in *constrictum*, the foveæ and carina even smaller but distinct; elytra one-half longer than wide, two-fifths wider than the prothorax, obtusely ogival at tip, the striæ rather fine, unimpressed, the punctures distinct, rather close-set, obsolete at the declivity; foveæ near two and four sevenths. Length (♂♀) 3.7–4.1 mm.; width 1.4–1.65 mm. New Jersey and Delaware. Eleven examples..... **acticola** Csy.

Form suboval, moderately convex, shining, the anterior parts feebly alutaceous, feebly subæneous above; elytra not very intense black, each with a minute pale point on the basal declivity, very faint streaks on intervals eight to five near anterior third, the outermost long, and an oblique paler fascia near apical third, composed of lines on the five outer intervals, not coalescing with the distinct apical pale spot; under surface black, the abdomen slightly picescent, the legs dark rufous; head less than three-fourths as wide as the prothorax, the sulci sharply defined, narrow and deep, parallel; antennæ slender, piceous, paler at base, the medial joints very nearly three times as long as wide; prothorax one-half wider than long, only slightly narrowed at base, which is but little narrower than the apex and fully three-fourths the maximum width; sides rather strongly, subevenly rounded, becoming gradually broadly but distinctly sinuate basally, the angles right; anterior impression obsolescent, the posterior feeble and narrow but evident, the stria very fine; foveæ rather large, impressed, long, deep and linear axially, the carina shorter and fine but distinct; elytra one-half longer than wide, two-fifths wider than the prothorax, subcircular at tip; striæ rather fine, barely at all impressed, obsolescent near the apex, the punctures very fine, moderately close, larger and more distinct basally; foveæ near two and four sevenths. Length (♂) 3.5 mm.; width 1.33 mm. New Jersey (near the Delaware River).... **editum** n. sp.

65—Body in its inflated elytra and more convex form resembling the preceding subsection; the elytral striæ, though entire, are, on the declivity—more sloping than in the following species—fine but simply impressed and not groove-like. Rather small, greenish-black, shining, alutaceous anteriorly; elytra each with a small pale spot on the basal slope, also a broad external posterior spot curving about the apex, subequally wide throughout and well defined; under surface black, the abdomen partially rufous; epipleura dull rufous, their inner margin black; legs clear and pale rufous throughout; head large, with very prominent eyes, about as wide as the prothorax, the sulci rather feeble; antennæ very slender, fusco-testaceous, the medial joints not quite three times as long as wide; prothorax one-half wider than long, the base not much narrowed, three-fourths the maximum width; sides evenly, rather strongly rounded, becom-

ing deeply sinuate and nearly parallel for an appreciable distance in front of the very sharp right angles; margins broadly reflexed, finely so anteriad; impressions very feeble, the stria short and fine; foveæ small, deep, linear, distant from the rather long strong carina; elytra short, not one-half longer than wide, almost one-half wider than the prothorax, gradually ogival in nearly apical two-fifths; sides somewhat rapidly rounding at the humeri; striæ and punctures moderately fine; foveæ near basal and apical third. Length (♀) 4.0 mm.; width 1.45 mm. Texas (Brownsville),—Wickham.

vulpecula n. sp.

Body narrower and more elongate, less convex, the apical part of the elytra more feebly and gradually declivous as a rule, with the striæ there very fine but groove-like and unimpressed 66

66—Elytra uniform in color and rather pale brown. Body narrow, moderately convex, polished throughout, the head not alutaceous; anterior parts blackish, with feeble subæneous lustre; under surface piceous, the legs pale; head rather small, two-thirds as wide as the prothorax, with short and rather deep sulci and somewhat prominent eyes; antennæ fuscous, clearer basally, the medial joints barely more than twice as long as wide; prothorax barely a third wider than long, subtruncate at apex; base two-thirds the maximum width, widest barely at all before the middle; sides subevenly rounded from apex to the short gradual feeble sinus before the sharp right angles; margins rather narrowly, subevenly reflexed; impressions subobsolete, the stria fine; foveæ very small, deep, linear, within a feeble rugulose impression, the carina small and fine; elytra three-fifths longer than wide, scarcely two-fifths wider than the prothorax, gradually rounded behind; striæ somewhat fine, groove-like, unimpressed; punctures rather small, traceable to about apical fourth; foveæ before basal and near apical third. Length (♂) 3.8–4.0 mm.; width 1.35–1.4 mm. Arizona (southern) . . . . . **dejectum** Csy.

Elytra with extremely faint and nubilous posterior pallidity. Body narrow, very moderately convex, shining, slightly alutaceous anteriorly, black, with strong cupreo-æneous lustre throughout above; under surface and epipleura black; legs piceo-rufous, the femora nearly black; head but little narrower than the prothorax, with very prominent eyes, the sulci short, rather narrow and deep; antennæ slender, blackish, pale basally, the medial joints two and one-half times as long as wide; prothorax two-fifths wider than long, distinctly narrower at base than apex, widest near anterior two-fifths, the sides evenly and only moderately rounded from apex to the barely visible sinus at the angles; anterior impression feeble, the posterior evident, the stria fine; foveæ long and sublinear but broadly impressed and very shallow; carina moderate, fine; elytra two-thirds longer than wide, very gradually narrowing and rounding in posterior two-fifths, fully one-half wider than the prothorax; sides very gradually rounding toward the humeri; striæ fine, groove-like, unimpressed, the small punctures rapidly more distinct basally; foveæ near basal and apical third. Length (♀) 3.8 mm.; width 1.42 mm. Arizona (probably southern) . . . . . **docile** n. sp.

Elytra with a clearly defined external subapical spot, more or less broadly connected along the margin with the large apical pale area.....67

67—Form oblong-suboval, moderately convex, black, shining, the anterior parts greenish and more or less alutaceous; under surface black, the abdomen partly rufous, the legs piceous; epipleura blackish; head large, with very prominent eyes, five-sixths as wide as the prothorax, the sulci short, slightly converging; antennæ fuscous, paler basally, the medial joints about two and one-half times as long as wide; prothorax nearly one-half wider than long, the base evidently narrower than the moderately sinuate apex, widest at apical two-fifths, the sides strongly rounded, oblique and straighter posteriorly, gradually becoming feebly sinuate near the angles, which are scarcely more than right and very sharp; impressions very feeble, the stria extremely fine though subentire; foveæ small, oblong, deeply impressed, the carina moderate, fine; elytra three-fifths longer than wide, two-fifths wider than the prothorax, rather gradually rounding behind; striæ somewhat fine, groove-like, unimpressed, the punctures small but distinct except behind the middle, close-set; foveæ near two and four sevenths. Length (♂♀) 3.35–4.5 mm.; width 1.25–1.6 mm. Minnesota (Duluth), Michigan (Marquette), Nebraska (Malcolm), Missouri (St. Louis) and Texas (Dallas, Waco and Austin). Very abundant.....**sociale** n. sp.

Form, coloration and lustre almost similar, a little narrower; abdomen more rufescent, the legs clearer rufous; head not quite so large, three-fourths as wide as the prothorax or more, with very prominent eyes and rather longer neck, the sulci longer and parallel; antennæ nearly similar; prothorax smaller, one-half wider than long, nearly similar in outline and surface, except that the base is barely visibly narrower than the apex and the carina at each hind angle longer, being fully a fourth the total length and more strongly elevated; elytra narrower, one-half longer than wide, gradually rounded behind, two-fifths wider than the prothorax, the striæ similarly fine but evidently impressed, at apex not very fine as in *sociale* but notably impressed; punctures distinct, especially toward base, the foveæ near basal and apical third. Length (♂) 3.4 mm.; width 1.25 mm. Texas (El Paso). A single specimen, taken by the writer....**negligens** n. sp.

Form more parallel, narrow, very moderately convex, similar in coloration, the legs testaceous; head large, four-fifths as wide as the prothorax, with very prominent eyes, the sulci as in *sociale;* antennæ also nearly as in that species; prothorax larger, almost as wide as the elytra, though nearly similar in outline and surface, more transverse, three-fifths wider than long, the carina long as in *negligens;* elytra elongate-oval, with parallel and arcuate sides, very gradually narrowing and rounded at apex, three-fifths longer than wide, scarcely a third wider than the prothorax, the striæ rather fine, groove-like and unimpressed throughout, the punctures moderately separated, gradually strong basally but almost completely obsolete behind the middle; foveæ near basal and apical third. Length (♂) 3.6 mm.; width 1.3 mm. Arizona (probably southern).

fugitans n. sp.

68—Head about as wide as the prothorax, with conspicuously prominent eyes 69

Head always distinctly narrower than the prothorax, the eyes generally much less prominent 75

69—Prothorax relatively smaller, at base much narrower than an elytron, the sides broadly and only very feebly sinuate basally; antennæ long and slender, filiform, the second and third joints equal . . 70

Prothorax broader, at base subequal in width to an elytron, the sides becoming parallel for some distance before the hind angles; antennæ less elongate 71

70—Body ventricose, convex, polished throughout, black, with slight greenish lustre, the elytra each with a basal spot, and an external fascia at basal and apical third, the apex also pale, the spots generally nubilously defined; under surface black, the legs pale flavo-testaceous; head but just visibly narrower than the prothorax, the sulci parallel on the front, converging on the epistoma; antennæ slender, fusco-testaceous, the three basal joints and base of the fourth testaceous, not quite as long as the elytra, the medial joints slightly more than twice as long as wide; prothorax a third or fourth wider than long, truncate at apex and base, the base four-sevenths the maximum width; sides evenly and strongly rounded, becoming arcuately oblique in about basal half; angles right; impressions and stria very feeble; foveæ small, deep, elongate, next to the very short vestigial carina; elytra one-half longer than wide, nearly three-fourths wider than the prothorax, gradually obtusely ogival in more than apical third, the sides rapidly rounding at the humeri; striæ relatively rather coarse but scarcely at all impressed, obsolete near the apex, the punctures deep, rather large and close-set, the foveæ near basal and apical third. Length (♂ ♀) 2.8–3.1 mm.; width 1.0–1.2 mm. Rhode Island to Illinois and southward to Galveston and Austin, Texas. Abundant. [*Bemb. fallax* Dej.]. . . . . **affine** Say

Body even more strongly ventricose, nearly similar in coloration, lustre and in general habitus throughout, but with the antennæ longer, being fully as long as the elytra, with the medial joints fully two and one-half times as long as wide, the first and second joints exactly equal; prothorax less transverse, only just visibly wider than long, strongly rounded laterally more anteriad, the sides arcuately oblique from far before the middle; base more finely, evenly rugulose and without the coarse subserial punctures observable in *affine;* elytra relatively shorter, not quite one-half longer than wide, almost similarly sculptured and maculate. Length (♂) 3.1 mm.; width 1.25 mm. Michigan (Marquette) . . . . . **thespis** n. sp.

71—Elytral striæ entire. Form oblong-oval and rather convex, shining throughout and black, with greenish lustre; elytra flavo-testaceous, with a feeble cloud near the scutellum, a transverse submedial fascia, broadly united suturally with a more posterior, transversely oval area, black, the anterior fovea also within a small dark spot; under surface black, the inflexed sides piceous, the legs bright rufous, very slender; head just visibly narrower than the prothorax, more evidently (♀), the sulci deep and subparallel, abruptly very fine

and more converging on the epistoma; antennæ moderately thick, fusco-testaceous, two-thirds as long as the elytra, the medial joints obconic, one-half longer than wide, the second distinctly shorter than the third; prothorax generally not quite one-half wider than long; base three-fourths the maximum width; sides strongly rounded from apex to the parallel basal part; anterior impression obsolescent, the subbasal rather distinct, rugulose; foveæ moderate in size, somewhat deep, sublinear, not adjoining the rather evident but much shorter carina; elytra one-half longer than wide, nearly one-half wider than the prothorax; striæ rather fine, just visibly impressed, fine but distinct at apex, the punctures small, somewhat close-set, traceable to the declivity; foveæ near basal and apical third. Length (♂ ♀) 2.7–3.2 mm.; width 1.0–1.18 mm. Arizona (Tuçson—taken by the writer—and Bill Williams Fork—taken by Prof. Snow). Rather abundant. [*Ochthedromus pictus* || Lec.]. . . **impotens** n. nov.

Elytral striæ slightly abbreviated at tip; frontal sulci feebly converging anteriorly 72

72—Antennæ slender, filiform, fully three-fourths as long as the elytra, the medial joints fully twice as long as wide. Body rather narrow, elongate and convex, polished throughout, black and with scarcely metallic lustre; elytra flavate-brown, black posteriorly, the black area diminishing in width anteriorly, becoming narrow on the suture in basal third; there is also a black lateral area behind the middle, and the anterior fovea and the punctures of the striæ are also blackish; under surface black, the inflexed sides and legs pale; head not distinctly narrower than the prothorax, the antennæ fusco-testaceous; sulci very evenly convergent on the front and epistoma; prothorax two-fifths wider than long; base three-fourths the maximum width; sides moderately rounded from apex to the parallel basal part; base with some coarse sculpture, obsolete at the middle, the foveæ large, broadly impressed, irregularly sublinear, the carina short; elytra one-half longer than wide, about one-half wider than the prothorax, parallel, with arcuate sides, rapidly rounding at the humeri; striæ rather coarse but barely impressed, the punctures strong, moderately but irregularly separated, the foveæ near apical and basal third. Length (♂) 2.7 mm.; width 0.9 mm. Northern Illinois (Highland Park) . . . . . **æstivum** n. sp.

Antennæ shorter, with the medial joints much less than twice as long as wide 73

73—Antennæ clear testaceous throughout; elytra with very nubilous markings. Body rather short, moderately convex, blackish-piceous, polished, the elytra flavate, the sutural region posteriorly with large undefined darker areas, the anterior fovea minutely darker; behind the middle near each side, there is also a darker patch; head barely narrower than the prothorax, the sulci slightly converging; antennæ rather short and thick; prothorax two-fifths wider than long, much narrowed at base, the latter two-thirds the maximum width; sides strongly rounded, rapidly arcuato-oblique behind the middle to the parallel basal part; basal impression feebly rugulose, smooth and

obsolete medially; foveæ moderate, sublinear, the carina fine, closely paralleling the lateral edge, not distinct under slight amplification; elytra scarcely one-half longer than wide, about one-half wider than the prothorax, parallel, with arcuate sides and abruptly rounded humeri; striæ moderately coarse, distinctly impressed, the punctures moderate, deep; foveæ near basal and apical third. Length (♂ ♀) 2.5–2.6 mm.; width 0.85 mm. California (Yuma Reservation). Two examples. . . . . **frugale** n. sp.

Antennæ fuscous, clearer testaceous basally; elytra with the darker areas well defined 74

74—Form oblong-suboval, rather strongly convex, polished throughout, black, with feeble piceous tinge, the elytra flavate, with a post-scutellar spot and a large common dark area in more than apical half and limited by the apical pale area, which is subquadrate, with each side deeply sinuate, the anterior line of this dark area continued almost to each side margin by a less dark fascia; anterior fovea within a dark spot; legs and epipleura pale; head about as wide as the prothorax, with very prominent eyes, the sulci straight, feebly converging; antennæ moderate, the medial joints slightly less than twice as long as wide; prothorax well developed, two-fifths wider than long, the subtruncate base slightly more than two-thirds the maximum width, the sides strongly rounded to the parallel basal part; subbasal impression rather fine and near the basal margin, interrupted at the middle, the foveæ deep, sublinearly oval, close to the very indistinct carina; elytra one-half longer than wide, less than one-half wider than the prothorax, the parallel sides arcuate, rapidly rounded at the humeri; striæ moderate, somewhat impressed, the punctures deep, conspicuous and usually close-set; foveæ near basal and apical third. Length (♂ ♀) 2.4–2.65 mm.; width 0.75–0.9 mm. Texas (Brownsville, Dallas and Galveston), Nebraska (Malcolm), Missouri (St. Louis), and Iowa (Keokuk). Abundant. . **imbelle** n. sp.

Form moderately stout and convex, oblong, highly polished, black, with very feeble æneous lustre anteriorly, the flavate elytra maculate somewhat as in the preceding, except that the median fascia is prolonged anteriorly, along the median line of each elytron, almost to the small spot inclosing the anterior fovea; there is also a pronounced scutellar triangular dark area; head with prominent eyes, rather obviously narrower than the prothorax, the frontal part of the sulci subparallel; antennæ with the medial joints one-half longer than wide; prothorax well developed, short, one-half wider than long; base nearly three-fourths the maximum width; sides rather strongly rounded, oblique and evidently broadly sinuate basally, becoming nearly parallel, the angles about right; subbasal impression distinct and rugose except medially, the foveæ rather broadly impressed, the inner part sublinear, the carina short and indistinct; elytra rather short, scarcely one-half longer than wide, the parallel and feebly arcuate sides not very strongly rounded at the humeri; striæ relatively coarse, impressed, with strong and conspicuous punctures, the foveæ before basal and at apical third. Length (♂) 2.4 mm.; width 0.82 mm. Arizona (the locality not recorded). . **gratuitum** n. sp.

Form narrower, the size smaller; head and prothorax relatively much narrower than in either of the two preceding, moderately convex, polished, black, with piceous tinge; elytra flavate, maculate nearly as in the preceding; legs and epipleura pale; head barely visibly narrower than the prothorax, with very prominent eyes; sulci barely visibly converging; antennæ with the medial joints obconic, one-half longer than wide; prothorax a third wider than long, the base fully two-thirds the maximum width; sides strongly rounded to the straight parallel basal part; subbasal impression distinct, rugose, interrupted medially; foveæ moderately deep, oval, the carina short and feeble; elytra one-half longer than wide, the parallel sides somewhat strongly arcuate, rapidly rounding at the humeri; striæ rather fine, slightly impressed, the punctures small but rather deep, usually somewhat well separated; foveæ as usual, not rigidly fixed in position, varying from near basal and apical third to before and behind these positions. Length (♂ ♀) 2.1–2.4 mm.; width 0.7–0.85 mm. California (Sonoma and Sta. Cruz Cos.) and Nevada (Reno). One of the smallest species of *Bembidion*..... **virgatulum** n. sp.

75—Sides of the prothorax becoming parallel for an appreciable distance before the basal angles.....76

Sides oblique behind, becoming only feebly sinuate near the angles; elytral striæ slightly abbreviated at tip.....84

76—Elytral striæ not entire, in part slightly abbreviated at tip.....77

Elytral striæ entire, the relationship with the preceding analogous to that of *sociale* and allies with *constrictum* and related species in the preceding section; antennæ more slender.....80

77—Frontal sulci parallel or very nearly; species the largest of this *versicolor* section of the subgenus.....78

Frontal sulci almost as strongly converging as in the *assimile* group, but not coalescent at the front margin of the epistoma.....79

78—Body elongate-suboval, convex, shining, colored as in the preceding, except that the legs are more obscure, the femora frequently piceous; head four-fifths as wide as the prothorax, the eyes rather large, moderately prominent; antennæ colored as usual, rather more slender, the medial joints somewhat more than one-half longer than wide; prothorax moderately transverse, longer than in the two following, not quite two-fifths wider than long, the parallel part of the base about a sixth the total length; sides strongly rounded; base less than three-fourths the maximum width; foveæ rather deep, linear, slightly distant from the moderate carina; elytra fully one-half or more longer than wide, nearly one-half wider than the prothorax, oblong-oval in form; striæ fine, scarcely impressed, the punctures notably fine and inconspicuous, moderately separated. Length (♂ ♀) 2.8–3.2 mm.; width 1.15–1.2 mm. Pennsylvania, New York (Lake Champlain) and Lake Superior (Marquette and Duluth). Abundant..... **decipiens** Dej.

Body more slender and much less ventricose than in the preceding species, the elytra black, with the paler markings small and widely isolated, shining, the elytra slightly less so; head smaller than in *decipiens*, much narrower than the prothorax; eyes somewhat similar but

slightly less prominent, the sulci finer; antennæ blackish, gradually testaceous basally, three-fourths as long as the elytra, with the medial joints not quite twice as long as wide; prothorax nearly as in *decipiens*, but with the parallel basal parts of the sides shorter, the sides less strongly rounded anteriorly than in either of the two preceding; foveæ deep, rather close to the short carina; elytra three-fifths longer than wide, two-fifths wider than the prothorax, parallel, with broadly arcuate sides, the striæ fine, feebly impressed and finely punctate; pale maculæ forming a slender subhumeral ring open internally, also a narrow oblique fascia near apical third, extending to inner third, the tip not pale. Length (♀) 2.65 mm.; width 0.85 mm. New York (Long Island),—Shoemaker. . . . **rotundiceps** n. sp.

Body a little larger, stout, convex, on the whole less shining but with similar style of coloration; head not greatly developed, though fully three-fourths as wide as the prothorax, the eyes notably smaller, only moderately prominent; antennæ thicker, black, the basal joint very obscurely rufous, the obconic medial joints barely one-half longer than wide; prothorax fully two-fifths wider than long, having still less strongly rounded sides and broader base, this being nearly four-fifths the maximum width, the parallel part at the base not quite a fifth the total length; foveæ very moderate, deep, the carina short and fine; elytra rather long, oblong-suboval, the striæ fine, unimpressed, with the very moderate punctures well separated; foveæ before basal and near apical third; hind tarsi rather short, three-fourths as long as the tibiæ. Length (♂♀) 2.9–3.2 mm.; width 1.1–1.25 mm. British Columbia (Metlakatla),—Keen.

tolerans n. sp.

79—Form moderately stout, the body small in size, convex, polished throughout, deep black, without pronounced metallic lustre; elytra black, the anterior half, in about external half of each, tawny rufous, this area approaching the suture more closely at two-fifths; near posterior third there is an external pale oblique fascia, extending to the third stria, the apex also pale; under surface black, the inflexed sides and legs blackish-piceous; head rather more than three-fourths as wide as the prothorax, the eyes moderate in size and prominence; antennæ rather long, heavy, blackish, four-fifths as long as the elytra, the medial joints obconic, one-half longer than wide; prothorax two-fifths wider than long; base three-fifths the maximum width, the sides strongly, subevenly rounded to the short basal parallel part; foveæ deep, sublinear, the carina feeble; elytra rather short, barely one-half longer than wide, scarcely more than two-fifths wider than the prothorax, parallel and with rapidly rounded humeri as usual, somewhat obtusely ogival behind; striæ rather fine, very feebly impressed, the punctures moderately coarse, deep and distinct, rather well separated; foveæ as usual. Length (♂) 2.6 mm.; width 0.9 mm. New Mexico (Jemez Springs),—Woodgate. Three examples, one of which is probably a female. . . . . **egens** n. sp.

Form narrower and more parallel, small, convex, polished, piceous-black, the femora piceous; elytra with paler maculation as in *egens*, except that the apex is not pale; head four-fifths as wide as the prothorax,

the eyes moderate in size, rather prominent; converging sulci narrow, deep and straight as in *egens* and the *assimile* group; antennæ piceous, rather long and heavy, the strongly obconic medial joints scarcely one-half longer than wide; prothorax nearly as in *egens;* elytra narrower, slightly more than one-half longer than wide, two-fifths wider than the prothorax, obtusely parabolic at tip, the parallel sides more arcuate than in the preceding and the humeri less strongly rounded; striæ nearly similar and with distinct and more close-set punctures, but differing very much in becoming obsolete in apical fourth and not evident to within a short distance of the apex as in *egens* and the others preceding; foveæ nearly as in *egens.* Length (♀) 2.5 mm.; width 0.85 mm. Arizona (near Benson),—Dunn.

demissum n. sp.

Form moderately narrow and convex, highly polished and deep black throughout, the elytra without evident paler maculation, excepting a small spot at the middle of the base of each; legs piceous; head four-fifths as wide as the prothorax, the eyes moderate in size and prominence; antennæ rather long and heavy, piceous-black, the medial joints slightly obconic and distinctly less than twice as long as wide; prothorax much narrowed basally, fully two-fifths wider than long, the sides very oblique in about basal half, sinuate only at the angles, the parallel sides before which are extremely short; base barely three-fifths the maximum width; foveæ moderate, near the carina, which is very fine, close to the margin and indistinct under slight magnification; elytra three-fifths longer than wide, about one-half wider than the prothorax, gradually strongly rounded behind, the parallel sides arcuate; striæ shallow, feebly impressed, abbreviated at tip, the punctures relatively coarse, deep and rather well separated basally, finer posteriorly; foveæ before basal and near apical third. Length (♂) 2.6 mm.; width 0.9 mm. Mexico (Federal District..... ***indigens** n. sp.

Form more parallel, convex, shining throughout, black, with feeble greenish lustre, the elytra black, indefinitely rufous in more than outer half to behind basal third, also with a more distinct testaceous oblique fascia near apical third, extending inward to the third stria, the apex also pale; legs blackish; head nearly as in the preceding, the antennæ similar in color, rather less thick, the medial joints about twice as long as wide; prothorax one-half wider than long, the sides less rounded and less oblique behind than in the preceding; base nearly three-fourths the maximum width, the subparallel basal part of the sides a seventh or eighth the total length; foveæ rather long, sublinear, the carina fine but evident; elytra one-half longer than wide, gradually parabolic behind, barely two-fifths wider than the prothorax, arcuate at the sides; striæ moderate, only very feebly and not at all sharply impressed, abbreviated well before the tip; punctures rather small but deep and distinct, moderately separated; foveæ as in *indigens.* Length (♂) 2.6 mm.; width 0.85 mm. Mexico (Amecameca)..... ***pullulum** n. sp.

80—Antennæ with the medial joints obviously less than twice as long as wide..... 81

Antennæ with the medial joints about twice as long as wide.....83

81—Elytral striæ and punctures extremely fine. Body slender, very small, moderately convex, black; elytra not very shining, more strongly micro-reticulate than the anterior parts, nearly black, without distinct maculation, each indefinitely somewhat paler laterally toward base; under surface black, the legs pale piceo-testaceous; head four-fifths as wide as the prothorax, with moderate eyes, the frontal sulci parallel; antennæ three-fourths as long as the elytra, blackish, the basal joint obscurely rufescent, gradually thickened distally, the medial joints but slightly more than one-half longer than wide; prothorax a third wider than long, the sides evenly rounded to the parallel basal part, which is fully a sixth the total length; base fully three-fourths the maximum width; impressions subobsolete, the stria rather deeply impressed; foveæ moderate, linear, the carina short; elytra more than one-half longer than wide, gradually parabolic in apical two-fifths, two-fifths wider than the prothorax; striæ not evidently impressed, the very small punctures moderately separated; foveæ subequal, near basal and apical third. Length (♀) 2.35 mm.; width 0.7 mm. California (Lake Co.),—Fuchs.....**triviale** n. sp.

Elytral striæ less fine and slightly impressed, the punctures very distinct though small.....82

82—Body rather narrowly oblong-oval, moderately convex, black, the elytra feebly alutaceous and with very feebly defined paler marking, a transverse biarcuate pallid fascia behind the middle, in a darker region, being among the more obvious features; under surface black, the legs piceous; head three-fourths as wide as the prothorax; antennæ blackish, rather slender, three-fourths as long as the elytra, the medial joints about three-fourths longer than wide; prothorax two-fifths wider than long, the sides strongly rounded to the short parallel basal parts; foveæ broadly impressed and more opaque, linear at the bottom, the carina distinct; elytra more than one-half longer than wide, two-fifths wider than the prothorax, gradually rounding behind, the small punctures of the feebly impressed striæ distinct and rather close-set; foveæ equal, near basal and apical third. Length (♂♀) 2.5–2.7 mm.; width 0.8–1.0 mm. California (St. Helena, Napa Co., and Mt. Diablo).....**sordidulum** Chd.

Body still narrower, moderately convex, black, the elytra feebly pallescent, with very nubilous darker marking, of which a median undefined fascia and a subapical area are more noticeable; under surface black, the legs dark rufous; head three-fourths as wide as the prothorax, with the eyes very moderate both in size and prominence; antennæ unusual in development, blackish, obscurely rufous basally, rather thick although filiform and not distinctly longer than the head and prothorax, the medial joints barely one-half, the tenth joint only a third, longer than wide, the third much longer than either the second or fourth as in the other allied species; prothorax two-fifths wider than long; base three-fourths the maximum width; sides moderately rounded, oblique and sinuate basally, the parallel part shorter than usual; foveæ small, sublinear, slightly separated

from the distinct carina; elytra one-half or more longer than wide, nearly one-half wider than the prothorax, parallel, with arcuate sides and evenly rounded apex; striæ fine, feebly impressed, the punctures small but distinct; foveæ subequal, near basal and apical third. Length (♀) 2.65 mm.; width 0.85 mm. California (Lake Co.),—Fuchs. . . . . **temperans** n. sp.

83—Prothorax short and more transverse, three-fifths wider than long. Body oblong-suboval, rather convex, black, with feeble greenish lustre, the head barely visibly alutaceous; elytra brownish-flavate, with a feeble scutellar cloud, the anterior foveæ, a transverse biarcuate medial fascia and a large subapical area, divided by the suture, blackish; legs blackish-piceous; head three-fourths as wide as the prothorax, the eyes rather prominent; antennæ slender, nearly three-fourths as long as the elytra, blackish, the basal joint rufous, the medial joints fully twice as long as wide; prothorax with moderately arcuate sides, the basal parallel part nearly a fifth the total length; base broad, almost four-fifths the maximum width; foveæ deep, linear, distant from the very distinct carina; elytra three-fifths longer than wide and less than one-half wider than the prothorax, the parallel sides broadly arcuate; striæ moderately fine, feebly impressed, the punctures not coarse but deep and conspicuous, rather close-set; foveæ near basal and apical third. Length (♂♀) 2.6–2.85 mm.; width 1.0–1.2 mm. Utah (Provo—Wickham; also southern part of the state—Weidt). Rocky Mts.—LeConte.

timidum Lec.

Prothorax much less abbreviated. Body oblong, very moderately convex, shining, the head not alutaceous, black, with subæneous lustre, the elytra brownish-flavate, marked as in *timidum;* under surface black, the inflexed sides and legs dark testaceous; head three-fourths to four-fifths as wide as the prothorax, the eyes rather prominent; frontal sulci almost truly parallel; antennæ piceous, rather long and slender, three-fourths as long as the elytra, the medial joints obconic and barely or scarcely twice as long as wide; prothorax scarcely more than a third wider than long; base three-fourths the maximum width; outer basal parts dull, the foveæ small, deeply impressed, the carina short and fine; sides broadly, evenly rounded, the parallel basal part a sixth the total length; elytra slightly more than one-half longer than wide and fully one-half wider than the prothorax, arcuate at the sides; striæ moderate, deep, distinctly impressed, the punctures fine but distinct, rather close-set; foveæ as usual. Length (♂♀) 2.4–2.9 mm.; width 0.8–1.0 mm. California (coast regions, from Sta. Cruz to Humboldt). . . . . **flavopictum** Mots.

84—Form elongate-suboval, moderately convex, shining, the elytra very feebly alutaceous, black, with testaceous legs and epipleura, the elytra black, tawny at the sides in more than basal third, more inwardly at basal third opposite two small elongate spots on the third interval—before and behind the fovea, also in an oblique fascia near apical third, extending to the third stria, and also in an apical area, the pale spots composed of lines separated by the black striæ; head three-fourths as wide as the prothorax; antennæ rather

heavy, fully three-fourths as long as the elytra, fuscous, gradually pale basally, the medial joints slightly less than twice as long as wide; prothorax fully two-fifths wider than long, the sides strongly rounded, oblique in basal half, gradually very moderately sinuate toward the angles; base three-fourths the maximum width; foveæ long, linear, distant from the rather long distinct carina; elytra fully one-half longer than wide, two-fifths wider than the prothorax, parallel, with arcuate sides; striæ fine, scarcely impressed, feebly so suturally, the punctures fine but deep, not very close-set; foveæ near basal and apical third, the posterior the smaller. Length (♂♀) 2.35–2.8 mm.; width 0.75–1.0 mm. Summit of Mt. Washington, New York (Lake Champlain) to northern Illinois and Duluth, Minnesota. Abundant.....**versicolor** Lec.

Form shorter, the surface rather more convex, deep black, highly polished, the elytra scarcely less so; elytra black, maculate very nearly as in *versicolor;* legs bright rufous; head three-fourths as wide as the prothorax, the eyes rather less prominent than in the preceding; antennæ nearly similar; prothorax relatively larger, similar in general outline, the hind angles slightly obtuse, the foveæ shorter, oval, closer to the carina, which is notably shorter; elytra barely one-half longer than wide, nearly two-fifths wider than the prothorax, more obtusely rounded behind, the parallel sides similarly arcuate, the striæ, punctures and foveæ almost as in *versicolor.* Length (♂♀) 2.4–2.5 mm.; width 0.75–0.8 mm. Rhode Island (Boston Neck).

pellax n. sp.

85—Body very small, rather slender, subparallel, convex, subalutaceous, pale castaneous in color, the elytra slightly paler, perfectly uniform; legs very pale flavate; head suborbicular, three-fourths as wide as the prothorax, the subparallel sulci rather distant from the eyes, the latter very moderate in prominence; antennæ rather thick, four-fifths as long as the elytra, fuscous, pale testaceous basally, the medial joints not quite twice as long as wide; prothorax large, between a fourth and third wider than long, widest at two-fifths from the apex; base two-thirds the maximum width and distinctly narrower than the apex; sides rather narrowly reflexed, broadly, subevenly rounded, oblique in about basal half, becoming feebly sinuate toward the angles, which are sharp and right; apex truncate; anterior impression distinct medially, the posterior broad, deep and subangular, the stria very fine; foveæ small, deep, sublinear, the carina short, fine and indistinct; elytra oblong-oval, one-half longer than wide, only a third wider than the prothorax, the parallel sides arcuate, rather broadly rounding at the humeri, broadly parabolic behind; striæ fine, feebly impressed, entire; punctures small, feebly impressed, very widely separated, except in the first two striæ, the scutellar stria very short, of about two punctures; foveæ before basal and near apical third. Length (♂) 2.4 mm.; width 0.8 mm. Ontario (Ottawa),—W. H. Harrington.....**muscicola** Hayw.

86—Elytra in great part black; body larger in size. Form oblong-suboval, moderately convex, shining, the elytra feebly alutaceous, black, the anterior parts with feeble greenish lustre; elytra without

metallic lustre, faintly and nubilously pale laterally toward base, at the extreme apex and more distinctly in a biarcuate fascia near apical fourth; under surface black, the legs piceous or nearly black; head rather small, scarcely three-fourths as wide as the prothorax, with moderate, very convex eyes and strong parallel sulci; antennæ piceous, with black basal joint, rather heavy, three-fourths as long as the elytra, the medial joints not quite three times as long as wide; prothorax nearly one-half wider than long; base narrower than the apex, fully three-fourths the maximum width; sides strongly, subevenly rounded, barely visibly sinuate basally, the angles minutely subprominent; impressions subobsolete; foveæ broadly impressed, shallow and rugose, the carina strong, moderately long; elytra oblong, nearly three-fifths longer than wide, obtusely rounded at apex; striæ fine, entire, not evidently impressed and very finely punctate, the punctures rather close-set; foveæ near one and three fourths and four-sevenths. Length (♂ ♀) 5.0–6.3 mm.; width 1.9–2.25 mm. Utah (Provo and Little Salt Lake),—Wickham. Nine examples.

scudderi Lec.

Elytra in great part pale brownish-flavate.....87

87—Prothorax subequal to the elytra in width, the upper surface moderately convex. Form parallel; surface polished throughout, deep black anteriorly, the elytra with a feeble scutellar cloud, small spots at the anterior foveæ, a biarcuate, slightly post-median fascia and, each, a small area between this and the apex, blackish; under surface black, the legs piceous, the epipleura and hypomera in great part pale; head larger, fully three-fourths as wide as the prothorax, the eyes moderate but prominent; sulci broad and deep; antennæ fuscotestaceous, three-fourths as long as the elytra, the medial joints as in *scudderi;* prothorax slightly more than one-half wider than long, otherwise as in *scudderi*, the sides not quite so broadly reflexed; elytra oblong, parallel, nearly three-fifths longer than wide, in form and convexity almost as in *scudderi*, except that they are only very little wider than the prothorax and the surface is more shining; striæ entire, not quite so fine and more impressed, the punctures not so minute, distinct and more widely separated; foveæ apparently similar. Length (♀) 5.6 mm.; width 2.0 mm. Colorado (Colorado Springs),—Wickham.....**consimile** Hayw.

Prothorax much narrower than the elytra; upper surface strongly depressed. Form oblong-elongate; lustre shining, black, the anterior parts with bright green reflections in the depressions and anterior and posterior rugosities of the pronotum; elytra with black maculation almost as in the preceding, except that the fascia is more post-median, the concavity along the margin black, with green lustre medially; under surface black, with greenish lustre, the legs and epipleura rufous; head nearly as in *consimile*, the testaceous antennæ shorter and thicker, the medial joints twice as long as wide; prothorax two-fifths wider than long, the general outline as in the two preceding, except that the sides are less broadly rounded before the middle and become distinctly sinuate basally, the angles sharp, right and subprominent, the sides of the base more oblique; basal impression much

deeper, not at all interrupted medially and strongly viridi-rugose, the foveæ larger, shallow and strongly rugose, the carina distinct; elytra three-fifths longer than wide, fully two-fifths wider than the prothorax, parallel, with nearly straight sides, rapidly obtuse at apex; striæ nearly as in *consimile* but scarcely impressed, the punctures finer; foveæ near basal third, at three-fifths and at six-sevenths. Length (♂) 4.8 mm.; width 1.7 mm. Utah.....**henshawi** Hayw.

The division of the greater part of the very numerous species of the *variegatum* section of *Notaphus* on geographic lines, appears to be appropriate, since no species known to me inhabits regions both to the east and west of the great backbone of the continent; some found on the Pacific slope resemble and have been confounded with eastern species of the *patruele* type, but they are all distinct and no more than closely allied. This division, as established by natural evolution, is a boon not only to the taxonomist, but to the collector endeavoring to identify his material, since sharply drawn differential characters of a general nature are exceedingly few in this most difficult section of the subgenus. It should also be said, in reference to the first character used above to define sections of the subgenus *Notaphus*, that there are some exceptions. For instance, under those having the base of the prothorax as wide as the apex or wider, a few such as *extricatum*, *caudex* and *pimanum*, have the base more or less evidently narrower than the apex, but the rest of the organization and peculiarities of ornamentation prevent us from disassociating them. So also in the case of the so-called *dentellum*, the prothorax is not narrower at base than at apex, but the general physiognomy of that species places it among the allies of *constrictum;* in *graciliforme* Hayw., in fact, the base is said to be narrower than the apex, though this is not apparent in a specimen which I received under that name, said to have been identified by the author himself. It is because of the existence of the subspecies *graciliforme*, that I regard this *dentellum*-like form to have been long established in America, and therefore probably not identical with the European *dentellum;* it is recorded above under the LeContean name *arcuatum*.

The species *imperitum* and *prociduum*, above described from the Puget Sound region, are sometimes identified as *coloradense* Hayw., but the statements that the prothorax is nearly twice as wide as long and the elytra only slightly wider than the prothorax in *colo-*

radense, are so manifestly incongruous, that that species, from the mountains of southwestern Colorado, must assuredly be a different thing. It is singular that no example of the bright cupreous species from *idoneum* to *continens*, described above, appears to have fallen under the observation of earlier writers; *obsequens* is so much smaller and narrower than typical *idoneum*, that additional material may prove it to be specifically distinct.

As remarked by LeConte, the Marquette specimens identified above as *nigripes* Kirby, are apparently so much smaller than Kirby's measurements would indicate, that they may not properly represent that species, but whether identical or not, they at least belong to a very isolated species of the subgenus. My two specimens of *umbratum* Lec., are much smaller than the average given by LeConte and Hayward, but I have reason to believe that the species is truly represented by them; it is to be noted that the closely allied *variolosum* also varies unusually in the size of individuals. The Mexican *semifasciatum* Say belongs to the subsection *augurale* —*simulator*, as limited above.

The species peculiar to the Pacific coast regions, generally with rather convex surface and always having the elytral maculation more or less obscure, are much more numerous than I had anticipated before studying them attentively, and I am under some doubt concerning the identification of *approximatum* and *consentaneum* of LeConte; those selected agree with the original inadequate descriptions, but the matter could not be settled conclusively without actual comparison with the types if they still exist. *Gulosum* is related apparently to *suspectum* Blaisd., but the prothorax is oblique at the sides in fully basal half, the anterior thoracic angles are less bluntly rounded and the maculation of the elytra is somewhat different.

It is to be regretted that the erroneous identification of *variegatum* Say, with *patruele* Dej., whoever may have been responsible for it, should have taken so permanent a hold as to be repeated by Mr. Hayward, for it is this error that caused Dr. Hamilton to describe his *postfasciatum* as a new species. Referring to Say's description of *variegatum*, it may be seen that its resemblance to *dorsale* is so close, especially in the peculiar type of elytral ornamentation, that the author was in some doubt whether it should not

rather be regarded as a variety of that species; this alone would indicate the true *variegatum* to be the species described as *postfasciatum* by Hamilton; but the subject is conclusively set at rest by the length ascribed to *variegatum* by its author—$\frac{1}{5}$ inch, or 5 mm.—which suits *postfasciatum* perfectly, but is much too great for even the largest known example of *patruele* or of *posticum*, although Say apparently included some of these forms in his general conception of *variegatum*.

It is probable that *rubiginosum* Lec., which is unknown to me, belongs to the same section as *novellum*, a very peculiar minute species from the Sierras of California; *rubiginosum* occurs in the mountains of Colorado, at Garland.

In the *vile* section, no one of the above described species can be identified definitely with any one of the three already known. I have personally compared the type of *parabile* with that of *vile*, from San Diego, and the two differ greatly, especially in the much broader prothorax of the former, and also of that of the still more minute and slender *diligens*. In regard to *morulum* Lec., recalling *concolor* in form and habitus, as intimated by Hayward, and inhabiting more northern regions in Hudson Bay Territory, little further need be said, as I have seen nothing resembling it. It only remains to compare the type of *dyschirinum* Lec., said to be from the country east of old Fort Colville; it is possible that either *agitabile* or *atrolucens* may be identical, but in view of the inadequate character of all accessible descriptions, absence of the type and manifold plurality of allied species, it would be useless to assign LeConte's name to any one of those here described; it would at best be but a guess and, in case of future proven identity, it will be easy to place the proper name in synonymy. Attention should be called to an evident mistake by LeConte in giving .19 inch or 4.7 mm. as the length of *dyschirinum;* this is corrected by Hayward, who gives the length as 3 to 3.75 mm.

Vinnulum was identified by Horn and Hayward as *scintillans* Bates, from the southern parts of Mexico, presumably because of a remark made by Bates to the effect that specimens assumed by Horn to be *vinnulum*, departed so little from *scintillans* as to be unworthy of a distinctive name, differing only in the striæ being less impressed and losing their punctures at a greater distance from

the apex; but it is stated under the description of *scintillans*, that the color of the body is viridi-æneous, the elytra ornamented with flavate lines, and the length as 4.6 mm.; also that the frontal sulci are short and the sides of the prothorax sinuate basally, with the angles right. None of these characters suits *vinnulum* at all well, and I therefore have no doubt that the two species are distinct. *Definitum* is evidently a related species, but differs in the small elytral punctures, color, shorter antennæ, form of the prothorax and many other characters. The knowledge of these two species from Arizona, demonstrates that there are a number of distinct species of the *vinnulum* section as defined above.

It is probable that the Alaskan *increnatum* Lec., given as a substitute for *nigripes* Mann., a preoccupied name, is distinct and in no way a synonym of *dentellum*, or its American representative *arcuatum* Lec., as stated by Hayward. The coloration of the legs must be quite different and the localities of the two forms are remotely separated.

I fail to find anything resembling the true *cordatum* Lec., among my material and the above description is derived from the original; *placabile* is smaller, more slender, probably less flat above and has a different scheme of elytral maculation, as can be observed from the description; it also inhabits a climatically very different section of the country. The elytral maculation of *cordatum*, judging by the description, is evidently more of the *patruele* type, while that of *placabile* agrees perfectly with the peculiar *insulatum* type of maculation, this being quite different from that of *patruele* and its numerous allied species, especially in the humeral region of the elytra.

The species *acticola* and *vividum* were erroneously reduced to synonymy by Horn and Hayward; the former is decidedly a smaller species than either *contractum* or *constrictum*, with smaller head and prothorax than either and also having a more slender form than *constrictum* and notably shorter elytra than *contractum*, while *vividum* is wholly out of place when associated with any one of the three mentioned, being a member as it is of a peculiar subsection represented above by the Floridian *prosperum* and *luculentum*, which are characterized by the very much narrower base of the prothorax, greatly abbreviated elytral striæ and deep black polished

surface. The elytral punctures of *vividum* are much less coarse than in either *prosperum* or *luculentum*, these two being mutually distinguishable by the smaller head, and smaller and differently shaped prothorax of *luculentum*. *Constrictum* seems to be more essentially a maritime species, or at least I have seen no specimens taken far from the seashore. The individually abundant, smaller and narrower species, widely distributed from Lake Superior to Texas, named *sociale* above, has doubtless been hitherto confounded with *constrictum;* it however differs altogether in the striation of the elytral apex, besides its shorter prothorax, narrower form and smaller size; at its southern limit of distribution, there is a form taken by Wickham at Dallas, which might appear to be varietally different, being somewhat narrower, flatter, with less deep black elytra and a still slightly wider head; *negligens* and *fugitans* are also closely allied to *sociale*, but I believe them to be distinct, judging by the habitus and other structural evidences, in conjunction with their widely different geographic environments.

The species allied to *affine* and *versicolor* constitute a clearly circumscribed section of *Notaphus*, which has been very inadequately studied heretofore. As organized above, however, it includes three well differentiated subsections, represented by *affine*, with parallel frontal sulci, feebly transverse and basally much narrowed prothorax and longer, very slender antennæ; *versicolor*, with subparallel sulci, broader thoracic base and less elongate and usually thicker antennæ, and *egens* and the other three associated with it in the table, having strongly converging sulci, almost is in the *assimile* group, but well separated at apex and not confluent as they are in that group, and also having a somewhat different scheme of elytral maculation. *Cognatum* Dej., is evidently allied to *pullulum*, but the only pale elytral markings of *cognatum* are the apex and a small posterior external spot, and the obliquity of the frontal sulci appears not to be so decided, from the language used by Dejean—"un peu oblique." There are evidently a considerable number of species allied to *cognatum*, of which four are described above, and they may possibly be held to form a distinct section of *Notaphus*, constituting one of its bonds with the *assimile* group.

The common Texas species with large head and prominent eyes, named *imbelle* above, extends to the northward through the Mis-

sissippi Valley, but not to the dry and climatically very different western country, where it is replaced by *impotens*, having entire elytral striæ. *Flavopictum*, from the northern California coast, resembles *impotens* and has the head relatively almost as large, but can easily be observed to differ in its narrower body and less thickened antennæ. These three species were confused by Mr. Fall (Tr. Am. Ent. Soc., 1910, p. 97) under the name *pictum* or *flavopictum*. That author also confounded the local mountain species, with entire elytral striæ, named *timidum* by LeConte, with the more widely diffused northern species *decipiens* and *versicolor*, having slightly abbreviated striæ. Mr. Hayward was decidedly in error in stating both *decipiens* and *fallax* of Dejean, to be synonyms of *affine; fallax* is truly a synonym, but *decipiens* is quite different and was far removed from *fallax* in the work of Dejean. The subobsolete sinuation of the sides of the prothorax in *versicolor*, was specially mentioned by LeConte; this separates it very clearly from the larger *decipiens;* it is a widely distributed and abundant northern species.

The species described by Hayward under the name *muscicola*—previously identified erroneously as the European *lampros*—should not have been associated with *affine* by its author; it differs greatly in general habitus due to its more oval, uniformly colored elytra, large prothorax, widely spaced elytral punctures, short scutellar stria, alutaceous lustre and in other ways; in fact, it is one of the more isolated species of the entire genus.

The scudderi section of *Notaphus* is also isolated by reason of general habitus, and especially, because of the three dorsal foveæ of the elytra, but cannot for the latter reason alone, be separated as a distinct group of *Bembidion*, as shown previously under the *bifasciatum* group. My single example of *consimile* lacks all trace of the middle fovea on both elytra, though the others are normal and in the usual very anterior and posterior positions. *Hageni* Hayw. (*sexpunctatum* || Lec.) from the lower Colorado River Valley, is unknown to me and is apparently still represented solely by the single type specimen.

Group XIII—*sphæroderum*

Subgenus **Cyclolopha** nov.

Species resembling the singular *Bembidion sphæroderum*, described by Mr. Bates from Mexico (Biol. C.-A., I, i, 1882, p. 147), occur in Arizona and New Mexico, but appear to have been unknown to our earlier reviewers. In their small, oblong-oval, convex body and virtual absence of posterior thoracic angles, they suggest somewhat the European subgenus *Philochthus*, but on comparison with *Philochthus guttula* and *biguttatus* Fabr., as depicted by Duval, they are seen at once to differ in the very much more obliterated hind angles of the prothorax, and also in the presence of a coarsely beaded margin along the thoracic base, in which they resemble *Lopha* more than they do *Philochthus*, and, as further proof of this relationship, Mr. Bates has described Mexican species, such as *cyclodes*, with elytral maculation resembling somewhat that seen in *Lopha quadrimaculata*. *Cyclolopha* may be regarded, however, as the American analogue of *Philochthus*. The four species at hand may be described as follows:

Elytra oblong, with parallel, feebly arcuate sides.....2
Elytra oval, with strongly arcuate sides.....3
2—Form parallel, moderately convex, highly polished and black throughout above, without metallic lustre; under surface piceous, the inflexed sides and legs rufous; head two-thirds as wide as the prothorax, with moderate, prominent eyes and narrow, slightly converging sulci; antennæ moderately slender, two-thirds as long as the elytra, fuscous, gradually testaceous basally, the medial joints slightly more than twice as long as wide; prothorax nearly four-fifths wider than long, the sides subparallel, almost evenly, moderately rounded and well reflexed, rounding rapidly at base and obliquely arcuate thence to the thoracic pedicel, which is strongly beaded and one-half the maximum width; the hind angles can barely be traced by the posterior setigerous fovea on the upturned edge; impressions obsolete, the stria excessively fine, subobsolete; foveæ very small, smooth, moderately deep, at the obtuse angle between the base and the obliquely arcuate sides adjoining; there is no trace of a carina; elytra three-fifths longer than wide, only a fourth or fifth wider than the prothorax, parallel, the sides rapidly rounding at the humeri; apex gradually parabolic; striæ extremely fine, unimpressed, obsolete behind the middle laterally and in posterior third inwardly, only the sutural entire, deep and groove-like; seventh stria completely wanting; punctures minute, feeble; foveæ near basal fourth and apical third, the anterior very close to the third stria, the other medial on the interval. Length (♂) 3.6 mm.; width 1.3 mm. Arizona (Grand Cañon of the Colorado),—T. Mitchell Prudden.....**occultum** n. sp.

Form slightly more ventricose, shorter, black, highly polished, not metallic; under surface black, the epipleura rufo-piceous, the legs dark rufous, the femora blackish; head more than three-fourths as wide as the prothorax, with prominent eyes and narrow, moderately converging sulci, with an elongate anterior fovea external to the sulcus as in *Lopha;* antennæ fuscous, the first three to four joints testaceous, shorter than in *occultum*, the medial joints not quite twice as long as wide; prothorax as in the preceding but smaller and less transverse, two-thirds wider than long, the parallel arcuate sides well reflexed; surface throughout similar, except that both the transverse impressions are evident medially, though feeble; elytra much shorter, parallel, one-half longer than wide, two-fifths wider than the prothorax, the humeri very rapidly rounded; apex gradually parabolic; striæ feebly and broadly impressed, obsolete in apical third, the seventh wanting, the sutural as usual; punctures rather small and widely spaced but distinct; foveæ as in *occultum*. Length (♂) 3.3 mm.; width 1.23 mm. Mexico (Cuernavaca). . ***aztecanum** n. sp.

3—Body rather strongly convex, polished, black, with scarcely metallic lustre, the under surface and legs rufous; head fully three-fourths as wide as the prothorax, with large and prominent eyes and slender, slightly oblique sulci; antennæ but little shorter than the elytra, testaceous, fuscous and somewhat incrassate distally, the medial joints between two and three times as long as wide; prothorax two-thirds wider than long, widest near apical third, the sides strongly rounded, becoming gradually less rounded and strongly converging behind about the middle, the posterior seta marking the position of the extremely obtuse and obliterated hind angle; base one-half the maximum width; impressions subobsolete; foveæ as in *occultum* but rather more linear; sides well reflexed, the basal bead strong; elytra one-half longer than wide or less, a fourth or fifth wider than the prothorax, oval, the humeri gradually and broadly rounded; striæ moderate, obliterated in apical two-fifths—or half laterally—the seventh represented by a few subbasal punctures and barely impressed; punctures not very fine, well separated and distinct; foveæ before basal and at apical third, the anterior near the third stria as usual. Length (♂ ♀) 3.2 mm.; width 1.2 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend.

***furtivum** n. sp.

Body similarly convex but more ventricose, piceous-black and shining; under surface piceous, the legs pale flavo-rufous; head not quite so large, though three-fourths as wide as the prothorax, the eyes and sulci nearly similar, the anterior fovea outside the sulci short and inconspicuous; antennæ rather short, blackish, gradually rufous basally, the medial joints barely twice as long as wide; prothorax less transverse and smaller than in *furtivum*, barely one-half wider than long, widest slightly before the middle, the sides more evenly and rather strongly rounded, gradually converging behind; base somewhat more than one-half the maximum width; impressions similarly very feeble, the basal bead strong and conspicuous; foveæ

small and feeble; elytra evenly oval, not quite one-half longer than wide, almost two-fifths wider than the prothorax, the striæ and punctures nearly as in *furtivum*, but rather finer. Length (♂) 2.9 mm.; width 1.15 mm. New Mexico (Jemez Springs),—Woodgate.

minax n. sp.

The species described above under the name *furtivum*, has a distinctly smaller prothorax, when compared with the width of the elytra, than in *sphæroderum* Bates, as shown by the drawing of the latter on the plate; this, in connection with the blackish femora, leads me to believe that it is distinct; perhaps it may be the indicated variety of *sphæroderum* with partially obscure legs, or closely related thereto. As there are, however, evidently a considerable number of species in this group, which is widely distributed over the various parts of Mexico, Arizona and New Mexico, there is but little possibility of actual specific identity of *furtivum* with *sphæroderum*. The above species are in no cases closely allied among themselves.

Group XIV—*quadrimaculatum*

Subgenus **Lopha** Steph.

The rather numerous very small species of this subgenus stand apart from the majority of types in the genus *Bembidion* in several striking characters. For example, the sides of the prothorax basally become briefly and feebly sinuate just before a minute projection bearing the strong setigerous puncture; this hind angle is, however, by no means at the extreme base, for the sides of the latter are very oblique for a short distance from the median truncate part or base proper, the general structure being in this respect suggestive of the preceding group, and, in a similar way, the subbasal impression takes the form of a continuous, but here strongly punctured, channel, delimiting the strongly beaded basal margin. At the minutely prominent hind angle there is in all known species a very minute fine carina, only observable under considerable enlargement; this is not wanting in *mutatum* and related forms as stated by Mr. Hayward. Between the moderately oblique frontal sulci and each side margin, there is anteriorly an elongate irregular fovea, which, in conjunction with the regular superciliary puncture, gives the appearance of a duplication of the sulci, with the outer sulcus inter-

rupted; but this condition properly should not be so described; the anterior external impression is also observable in the preceding group; it may be held, however, to presage the extreme development seen in *sulcatum*. The elytral striæ in *Lopha* are always much abbreviated behind. Our species are rather numerous and may be defined as follows:

Elytra highly polished throughout 2
Elytra with micro-reticulation, which is sometimes distinct under proper enlargement but often very feeble and apical only 10
2—Punctures of the elytral striæ small 3
Punctures of the striæ relatively coarse or strong, deep and more conspicuous 9
3—Elytra each with an anterior post-humeral and posterior, external, pale spot 4
Elytra each with but a single spot, post-humeral in position 6
4—Elytra with the four spots well developed and always evident, the posterior never obsolete so far as observed. Body moderately ventricose, polished, black, rather convex; under surface black, the epipleura piceous, the legs rufous; head scarcely to evidently narrower than the prothorax; antennæ as long as the elytra, thick, fuscous, gradually testaceous basally, the medial joints twice as long as wide; prothorax two-fifths or slightly more wider than long; base three-fifths the maximum width; sides strongly rounded anteriorly as usual; foveæ smooth, small, deep; fine impression along the basal bead with a series of moderate punctures, more or less obsolete at the middle; elytra oblong-oval, one-half longer than wide, two-fifths to half wider than the prothorax; striæ unimpressed, the punctures fine, well separated, obsolete from slightly behind the middle; foveæ near basal fourth and apical third. Length (♂ ♀) 2.6–3.4 mm.; width 0.8–1.2 mm. Rhode Island to Colorado (Boulder Co.). Generally somewhat abundant. [*Bemb. oppositum* Say]
quadrimaculatum Linn.
Elytra with the anterior spots always distinct, the posterior very small or faint and frequently wholly invisible 5
5—Body notably elongate, convex, polished, black, usually with faint bronze lustre, the post-humeral spots extending inward to about the middle of each elytron, the posterior spots small and faint, though generally traceable; under surface black, the legs blackish- piceous; head fully four-fifths as wide as the prothorax and wider than an elytron, the eyes well developed; antennæ thick, black throughout, four-fifths as long as the elytra, the medial joints not quite twice as long as wide; prothorax two-fifths wider than long, widest near anterior third; base three-fifths the maximum width; sides anteriorly strongly rounded; line of punctures before the basal bead confused, moderately coarse; foveæ smooth, not very small, oval and deep; elytra unusually elongate, three-fifths longer than wide, two-fifths wider than the prothorax, oblong-oval in form; striæ scarcely impressed, obsolete in apical third, the seventh a row of feeble punctures

to about the middle; punctures strong and well separated basally, finer posteriorly; foveæ much before basal and near apical third. Length (♂♀) 2.8–3.0 mm.; width 0.8–1.1 mm. British Columbia (Agassiz).....**gregale** n. sp.

Body much less elongate, polished, black, the anterior parts with steel-blue to bronzy lustre; anterior elytral spots large, extending inward beyond the middle, the posterior small, extremely feeble and often wholly untraceable; legs rufo-piceous, the femora blackish; head four-fifths as wide as the prothorax, the eyes large and prominent; antennæ as long as the elytra, fuscous and rather thick distally, gradually less thick and testaceous basally, the medial joints about twice as long as wide; prothorax in outline as in *gregale* but relatively smaller, with smaller foveæ and rather feebler line of confused punctures along the bead; elytra barely one-half longer than wide, fully one-half wider than the prothorax, oblong-suboval, the humeri rather narrowly rounded; striæ fine, not impressed, obsolete in apical third; punctures distinct and rather widely separated; seventh series not finer than the others, obsolete at the middle; foveæ rather before basal and behind apical third. Length (♂♀) 2.8–3.3 mm.; width 1.0–1.2 mm. Washington State (locality unrecorded; also at Spokane). Eight specimens.....**pugetanum** n. sp.

6—Species of the coast regions of California.....7

Species inhabiting the regions adjacent to the lower Truckee River on the eastern slope of the Sierras.....8

7—Form elongate-suboval, rather convex, highly polished, black, without metallic lustre, the elytra generally wholly black, but sometimes with a small and feebly defined post-humeral macula; legs piceo-rufous, the femora blackish; head well developed, with prominent eyes, generally but very little narrower than the prothorax; antennæ longer, almost as long as the elytra, blackish, in part rufous basally, the medial joints more than twice as long as wide; prothorax moderate, barely two-fifths wider than the long; sides subevenly, rather strongly rounded from apex to a very short parallel part at the obtuse but sharp and subprominent angles; base three-fifths the maximum width, the punctures before the bead strong, confused; foveæ moderate, formed as usual; elytra decidedly elongate, suboval, with rapidly rounded humeri and gradually parabolic apex, distinctly more than one-half longer than wide and about one-half wider then the prothorax; striæ subimpressed, obsolete somewhat behind apical third as a rule, the punctures fine and rather close-set; foveæ before basal and near apical third. Length (♂♀) 2.9–3.25 mm.; width 1.0–1.15 mm. California (Sta. Cruz to Napa and Sonoma Cos.). Rather abundant.....**crurale** Lec.

Form less elongate; coloration and lustre as in *crurale*, except that the legs are more often uniform obscure rufous, although the femora are sometimes darker, differing especially in having the post-humeral pale spot larger and only seldom barely traceable; head relatively not quite so wide, with similarly large and prominent eyes, fully four-fifths as wide as the prothorax, the antennæ rather thicker and not quite so long, similar in coloration, the medial joints about

twice as long as wide or somewhat less; prothorax nearly similar in size, general form and structure; elytra shorter than in *crurale* and one-half longer than wide, almost similar in striation, two-fifths to one-half wider than the prothorax. Length (♂♀) 2.7–3.2 mm.; width 0.9–1.15 mm. California (coast regions from Sonoma to Humboldt; San Francisco—LeConte).....**dubitans** Lec.

Form, coloration and lustre nearly as in *dubitans* but narrower and much smaller, the elytra with an extremely faint subbasal external pallidity, but without trace of anything like a macula; head very moderate, four-fifths as wide as the prothorax, the antennæ as in *dubitans* but still shorter, the medial joints less than twice as long as wide; prothorax small, about a third wider than long, in form and structure nearly as in the two preceding, except that the sides in more than basal half are less arcuate; elytra in form and striation nearly as in *dubitans* but rather narrower, not quite one-half wider than the prothorax, the foveæ behind basal fourth and near apical third. Length (♂) 2.6 mm.; width 0.8 mm. California (Paraiso Hot Springs, Monterey Co.).....**adductum** n. sp.

8—Body stout, suboblong, convex, polished, deep black, the elytra each with a large pale spot behind the humerus, extending two-thirds to the suture and not involving the lateral edge, which is black; legs obscure rufous, the femora blackish; head as usual, three-fourths as wide as the prothorax; antennæ black, heavy, testaceous basally, with the first three joints blackish above, as long as the elytra, the medial joints obconic, very nearly twice as long as wide; prothorax unusually large, one-half wider than long, widest at two-fifths from apex, the sides evenly and strongly rounded to the very short deep sinus delimiting the sharp and prominent angles; base three-fifths the maximum width, the irregularly punctato-rugose channel along the bead rather deep; foveæ small but deep, at the angles as usual; elytra oblong, barely one-half longer than wide, two-fifths wider than the prothorax, the sides barely arcuate and the humeri rapidly rounded; series of fine and widely spaced punctures not impressed, obsolete in apical third. Length (♂) 2.7–3.1 mm.; width 0.9–1.2 mm. Nevada (Reno). Four examples.....**sapphicum** n. sp.

9—Form moderately stout and convex, polished throughout, piceous-black, without marked metallic lustre; elytra each with a distinct post-humeral pale spot and another smaller, subexternal and near apical third, the latter sometimes wanting as in the original type; legs flavate; head four-fifths as wide as the prothorax, the sulci but just visibly convergent; antennæ rather heavy, pale testaceous, infuscate distally, the medial joints barely twice as long as wide; prothorax two-fifths wider than long and widest at apical third; sides strongly rounded anteriorly, very oblique and but just visibly arcuate from before the middle to the minutely prominent basal angles; base barely over half the maximum width; impressed line before the basal bead almost imperceptibly punctate, the foveæ small; elytra one-half longer than wide, two-fifths wider than the prothorax, oblong, parallel, with arcuate sides, the humeri broadly exposed to the narrow basal pedicel; striæ coarse, impressed, obsolete in about

apical third, the punctures strong; foveæ small, near basal fourth and apical third. Length (♂) 2.9 mm.; width 1.0 mm. Pennsylvania (Franklin Co.; near Lancaster—LeConte)..**pedicellatum** Lec.

Form narrower, more elongate, polished, black, the elytra maculate as in the preceding; legs pale brownish-flavate; head relatively larger, only very little narrower than the prothorax, the sulci deep, barely converging; antennæ very long and slender, a fourth longer than the elytra, pale brownish-testaceous, infumate near the apex, the medial joints slightly less than three times as long as wide; prothorax much less transverse than in the preceding, only about a fifth to fourth wider than long, similar in general outline, except that the sides anteriorly are less prominently rounded; base rather less than half the maximum width; elytra fully three-fifths longer than wide, less than two-fifths wider than the prothorax, parallel, with feebly arcuate sides, the oblique base long from the humeri to the pedicel; series of coarse and widely separated punctures not distinctly impressed, obsolete in apical third; foveæ as in the preceding; hind tarsi slender, almost as long as the tibiæ. Length (♂) 3.0 mm.; width 0.85 mm. District of Columbia.....**strigulosum** n. sp.

Form much more abbreviated, convex, deep black and highly polished; elytra with four small maculæ as in the two preceding; legs slender, pale flavate; head but very slightly narrower than the prothorax; sulci very feebly converging as usual, more so on the epistoma than on the front; antennæ rather slender, much longer than the elytra, fuscous, becoming testaceous in about basal half, the medial joints feebly obconic, two and one-half times as long as wide; prothorax a fourth wider than long, the sides strongly, evenly rounded anteriorly, very oblique and straighter in basal half to the minute and feebly prominent angles; punctures in the series before the basal beading small; foveæ minute; base distinctly less than half the maximum width; elytra short, scarcely one-half longer than wide, almost one-half wider than the prothorax, differing in outline from those of the two preceding in being posteriorly inflated, distinctly wider behind the middle than at base; series of rather strong and moderately separated punctures evidently and coarsely impressed toward the suture, but not externally, obsolete near apical third; foveæ small, just before basal and at apical third; hind tarsi very slender, only slightly shorter than the tibiæ. Length (♂ ♀) 2.7–3.0 mm.; width 0.8–0.92 mm. Missouri (St. Louis) and Illinois (Highland Park).
fastidiosum n. sp.

10—Elytra each with a well developed post-humeral pale spot, but without trace of a posterior macula.....11

Elytra, in the single specimens at hand, without trace of paler maculation.....12

11—Body elongate-suboval, convex and shining, the elytra very feebly alutaceous, deep black, excepting the large post-humeral pale macula; legs obscure rufo-testaceous, the femora infumate distally; head but slightly narrower than the prothorax, the sulci evidently converging; antennæ longer than the elytra, black, with the basal joint piceo-testaceous, distinctly heavy distally, more slender basally, the medial

joints slightly more than twice as long as wide; prothorax two-fifths wider than long, the sides evenly and strongly rounding in about apical, strongly converging and straighter in basal, half, the angles obtusely subprominent; base half the maximum width, the line of punctures before the bead feeble; foveæ rather small; carina rather more distinct than usual; elytra slightly more than one-half longer than wide, two-fifths wider than the prothorax, parallel, with distinctly arcuate sides and rather rapidly rounded humeri; striæ very fine, not impressed, obsolete in apical two-fifths; punctures fine, rather close-set, extending barely behind the middle; foveæ very small, near basal fourth and apical third. Length (♀) 3.4 mm.; width 1.2 mm. New Hampshire (summit of Mt. Washington). [*Ochthedromus axillaris* || Lec.—Lake Superior.] . . **mutatum** G. & H.

Body smaller, narrower, moderately convex, black, polished, the elytra with the micro-reticulation faint, more evident behind, the post-humeral pale spot large, extending inward to the middle; under surface piceous, the legs flavate, infumate at the knees, the tarsi fuscous; head but just visibly narrower than the prothorax, with moderate though very prominent eyes; antennæ rather thick, black, rufous beneath basally, not quite as long as the elytra, the medial joints slightly obconic, not quite twice as long as wide; prothorax a fourth wider than long, the sides subevenly rounded anteriorly, very oblique and less arcuate behind to the short sinus delimiting the prominent and sharp basal angles; base one-half the maximum width, the foveæ small, deep, smooth as usual; elytra nearly three-fifths longer than wide, about one-half wider than the prothorax, just visibly inflated posteriorly and slightly wider behind the middle than at base, the sides feebly arcuate; base oblique and arcuate from the distinct humeri to the pedicel; striæ fine, unimpressed, obsolete in more than apical third, the punctures minute and rather widely separated; foveæ very small, at basal fourth and apical third. Length (♂♀) 2.65–3.0 mm.; width 0.7–1.0 mm. Colorado (Boulder Co.),—Mrs. T. L. Casey. . . . . **vegetum** n. sp.

12—Entire elytra alutaceous, the micro-reticulation strong; striæ very fine but traceable almost to the apex. Body oblong, moderately convex, deep black, the anterior parts polished and more blue-black; under surface black, the legs wholly obscure rufous; head nearly four-fifths as wide as the prothorax, with the usual moderately converging sulci; eyes prominent; antennæ thick, black, in part rufous at base, as long as the elytra, the medial joints two-thirds longer than wide, subcylindric; prothorax one-half wider than long, the sides very evenly and strongly arcuate to the short posteriorly subdivergent basal part at the sharp, right and prominent angles; anterior impression distinct at the middle only, the line before the basal bead with a regular row of close punctures; base four-sevenths the total width; elytra parallel, with slightly arcuate sides, barely one-half longer than wide, only two-fifths wider than the prothorax; strial punctures very fine, traceable almost to the declivity; foveæ small, near basal fourth and apical third, the anterior close to the

third stria. Length (♀) 2.9 mm.; width 1.1 mm. Utah (southwestern),—Weidt. Colorado (Alamosa),—LeConte.

præcinctum Lec.

Entire elytra polished and immaculate, the micro-reticulation always extremely feeble, generally only traceable near the apex and under high magnifying power; striæ more abbreviated as usual.....13

13—Form rather narrow and convex, polished, deep black; under surface black, the legs piceous, the tibiæ rufous; head four-fifths as wide as the prothorax, with prominent eyes and moderately converging sulci; antennæ heavy, as long as the elytra, black, rufous beneath at base, the medial joints obconic, less than twice as long as wide; prothorax two-fifths wider than long, the sides strongly rounded anteriorly, very oblique and straighter in about basal half to the prominent and sharp, nearly right angles; impressions somewhat as in *præcinctum;* base three-fifths the maximum width; elytra more than one-half longer than wide, barely two-fifths wider than the prothorax, parallel, with arcuate sides; humeri rather broadly rounded, the base subtransverse thence to the pedicel; striæ excessively fine, unimpressed, gradually obsolete behind the middle, the punctures well separated and extremely minute; foveæ small, slightly before basal and at apical third. Length (♂) 3.0 mm.; width 1.0 mm. New Mexico (Fort Wingate),—Shufeldt.....**tenax** n. sp.

Form broader, more oblong, not quite so convex, shining, deep black; under surface black, the legs uniformly piceous; head as in the preceding in form and relative size; antennæ long, fully as long as the elytra, slender basally, somewhat incrassate distally, black, the basal joint rufous beneath; medial joints twice as long as wide; prothorax two-fifths wider than long, widest near anterior third, the sides evenly and strongly rounded from apex to the short parallel part at the sharp right angles; impressions as in *præcinctum;* base three-fifths the maximum width; foveæ deep, rounded; elytra parallel, with feebly arcuate sides, fully one-half longer than wide, scarcely one-half wider than the prothorax, the base transverse from the broadly rounded humeri to the pedicel; striæ fine, just visibly impressed suturally, traceable almost to the declivity; punctures very small and widely separated; foveæ rather before basal and behind apical third. Length (♂) 3.0 mm.; width 1.12 mm. Nevada (Elko),—Wickham.....**veridicum** n. sp.

Form narrower than in the preceding, the elytral striæ much more abbreviated, black, polished, the elytra in the type with slightly piceous tinge; legs obscure rufous throughout; head four-fifths as wide as the prothorax; antennæ heavy, almost as long as the elytra, blackish, obscure rufous at base, the medial joints not quite twice as long as wide; prothorax two-fifths wider than long, formed as in the preceding, except that the base is nearly two-thirds the maximum width, the angles sharp, almost right and abruptly prominent; elytra one-half longer than wide, two-fifths wider than the prothorax, the parallel sides moderately arcuate; humeri rather rapidly rounded; series of rather small separated punctures unimpressed and abbreviated in fully apical third; seventh series as strong as the others

but only distinct to about the middle; foveæ slightly before basal and behind apical third. Length (♂) 2.8 mm.; width 1.18 mm. California (Truckee). One example.....**relictum** n. sp.

The two species *crurale* and *dubitans* of LeConte, are considered to be synonymous by Mr. Hayward, but my studies do not confirm this; on separating the two forms into series and comparing them in this way, it can be observed that *crurale* is a materially larger species, relatively narrower, much more elongate and with a larger prothorax, and that there is but seldon a very small feeble pale spot behind the humeri, while in *dubitans* nearly all the specimens have at least a well defined trace of the spot, which usually is moderately large and well defined. Although the posterior spot in *pugetanum* is usually obsolete and at best very vague, the species can be distinguished from either of the more southern LeContean species by its heavier build and broader elytra, as well as the much larger and more conspicuous post-humeral spot. In *gregale* the posterior spot, though small, is usually evident but sometimes becomes completely obsolete. I am not positive that the Utah example above described as *præcinctum* Lec., is correctly identified, not having compared it directly with the type; it is a very distinct species in its dull elytra, with unusually long and feeble striæ. The Elko specimens taken by Wickham, were evidently confounded with *præcinctum* by Mr. Hayward; they are noted above under the name *veridicum*. That author also confounded the Colorado form, probably named *vegetum* above, with *mutatum*, the two are widely distinct however. *Jucundum* Horn, from Arizona, must be a very isolated species; it is unknown to me at present.

Group XV—*sulcatum*

Subgenus **Paralopha** nov.

In general characters, including habitus, the single species of this group known to me is allied most closely to the following *assimile* group, resembling it in style of ornamentation, having the characteristic small posterior external spot, but the converging frontal sulci do not unite at the anterior margin of the epistoma as they do in the *assimile* group, and have the unique peculiarity, so far as the American fauna is concerned, of being evenly double throughout their extent. Dr. Blaisdell places his *Bembidion concinnum*—

a preoccupied name—in the *sulcatum* group, but his description seems to show that the frontal sulci are not truly analogous to those of *sulcatum* Lec. The type may be described as follows:

Form moderately stout, rather strongly convex, shining, deep black, without metallic lustre, the elytra indefinitely paler at apex and each with an oblique external pale spot between apical third and fourth; under surface black, the legs dark rufous; head rather small, two-thirds as wide as the prothorax, with large but only moderately prominent eyes, the parallel converging ridges at each side strongly marked; antennæ moderately slender and blackish, the basal joint rufous, nearly four-fifths as long as the elytra, the medial joints cylindric, slightly more than twice as long as wide; prothorax two-fifths wider than long, equally wide at base and apex, widest barely before the middle, where the sides are subprominently rounded, sinuate and then subparallel basally; transverse impressions distinct, especially the posterior; foveæ moderate, rather deep and sublinear, not close to the equally long and distinct carina; hind angles right; elytra slightly more than one-half longer than wide, almost one-half wider than the prothorax, gradually obtusely ogival posteriorly, the parallel sides feebly arcuate, the humeri not sharply rounded; striæ moderate, subentire, feebly impressed suturad; punctures moderate, somewhat close, traceable to behind the middle; foveæ before basal and near apical third. Length (♂♀) 2.9–3.5 mm.; width 1.15–1.35 mm. New York (Lake Champlain) and Michigan (Marquette). Many specimens. [*Ochthedromus trepidus* Lec.]..... **sulcatum** Lec.

This is a peculiarly northern species and seems to be subject to very little intraspecific variation, even in size. Judging by the drawing given by Duval, the European *Bemb. gilvipes* Sturm, which in the latest catalogue is placed in the *quadrimaculatum* group preceding, should be congeneric with *sulcatum;* the frontal sulci are perfectly similar as depicted by Duval. *Sulcatum*, however, is certainly not a *Lopha*, nor is it even remotely related to *quadrimaculatum*. The subgenus *Lopha*, because of the peculiar basal formation of the prothorax, should be one of the first to receive full generic rank, if any such ratings be made in the future.

I have not seen the type of *Ochthedromus trepidus* Lec., and follow the synonymy given by Hayward; it seems to have been separated from *sulcatus* by LeConte, because of the extreme flatness of the strial intervals. An analogous case is that noted previously in this paper of *Melomalus effetus*, in its relationship with *flebilis*, which I cannot pretend to settle definitely without more material.

Group XVI—*assimile*

Subgenus **Diplocampa** Bedel

This group is as well defined and sharply delimited as *Lopha*, the peculiarity here being the very convergent and anteriorly connivent frontal sulci. These sulci do not actually coalesce at the epistomal apex, but expand theretoward, so that at the extreme apex they are usually in mutual contact, separated by a gradually acute convex intermediate surface. Outside each sulcus at apex there is a feeble oblong fovea, of the same nature as that previously noted under the *quadrimaculatum* group, but there is no further analogy between *Diplocampa* and *Lopha*, except in the row of punctures before the thoracic base and in the general characters of the genus *Bembidion*. In the more typical species there is an external posterior reddish spot on each elytron, as in *sulcatum*, but a considerable number of species have no trace of the spot, the elytra being uniform in coloration. Our species are rather numerous, those represented in my collection being determinable as follows:

Elytra alutaceous and micro-reticulate throughout; body somewhat stouter than usual. 2

Elytra polished, not micro-reticulate 3

2—Body oblong-suboval, moderately convex, alutaceous, the type blackish, the elytra each with a large external spot at apical fourth and the apex pale, the two connected broadly along the margin; under surface red-brown, the legs pale; head four-fifths as wide as the prothorax, the sulci deep; antennæ slender, pallid, the medial joints between two and three times as long as wide; prothorax two-fifths wider than long; base narrower than the truncate apex and nearly three-fourths the maximum width; sides strongly rounded to the basal parallel part, which is a fifth or sixth the total length; basal impression punctate but interrupted medially; foveæ smooth, deep, rounded, next to the short and rather indistinct carina; margins rather widely and strongly reflexed; elytra barely one-half longer than wide, nearly two-thirds wider than the prothorax, slightly wider behind the middle than at base, the sides somewhat arcuate; humeri rather rapidly rounded; striæ moderate, scarcely impressed, obliterated in apical fourth, the seventh a row of fine punctures, not extending to the middle; punctures fine and unusually close-set, traceable to the declivity; foveæ before basal and before apical third. Length (♀) 3.4 mm.; width 1.3 mm. California (St. Helena, Napa Co.) . . . . . **digressum** n. sp.

Body stout, convex and ventricose, feebly alutaceous, black, the posterior maculation as in the preceding; under surface black, the legs piceo-rufous; head slightly though evidently narrower than the prothorax,

the sulci very deep; eyes large, moderately prominent; antennæ slender, very nearly as long as the elytra, black, obscure rufous at base, the medial joints between two and three times as long as wide; prothorax fully two-fifths wider than long, the apex apparently even somewhat arcuate, much wider than the base, which has fully three-fourths the maximum width; sides arcuate, reflexed, rapidly converging and arcuate behind about the middle to the long and straight, parallel or even slightly diverging basal part, which is fully a fifth the total length; at each side of the middle near the base there is a transversely oval depression; foveæ deep, linear, separated from the carina, which is equally long and distinct; elytra barely one-half longer than wide, two-thirds wider than the prothorax, subparallel, with arcuate sides and rather gradually rounded humeri; striæ feebly impressed suturally, abbreviated at apex, much more considerably toward the sides, the seventh series not extending to the middle; punctures rather strong and widely spaced in the series, gradually very fine and obsolete posteriorly; foveæ at two and four sevenths. Length (♀) 3.7 mm.; width 1.5 mm. Michigan (Marquette),—Sherman..... **concretum** n. sp.

Body much less stout, convex, very feebly alutaceous, black, the elytra with posterior maculation as in the two preceding but more nubilous; under surface black, the legs bright rufous; head as wide as the prothorax, the sulci as in *concretum*, the eyes a little smaller but more prominent; antennæ slender, blackish, more gradually testaceous basally, the medial joints more obconic, slightly more than twice as long as wide; prothorax not so broad, barely a fourth wider than long but otherwise as in *concretum*, the impression at each side of the middle posteriorly not so marked, the deep elongate foveæ larger and a little longer than the distinct carina; anterior impression similarly evident though broadly concave medially, the stria fine, not entire; elytra similar in form, the arcuate sides rather more rapidly rounding basally, one-half longer than wide, nearly three-fourths wider than the prothorax; striæ rather fine, feebly impressed, the sutural strongly as usual, obsolete for a greater distance apically than in *concretum*, and with the punctures finer and less remotely separated; foveæ similar. Length (♀) 3.4–3.5 mm.; width 1.3–1.35 mm. Rhode Island (Boston Neck)..... **congruens** n. sp.

3—Species very small, much under 3 mm. in length; external frontal groove longer.....4

Species larger, approximating 3 mm. or more in length.....5

4—Form ventricose, rather strongly convex, shining, black, the elytra picescent, each with a relatively large and conspicuous subexternal flavate spot near apical fourth and almost isolated from the posterior and apical flavate margin; legs pale flavo-testaceous; head but very little narrower than the prothorax, the eyes prominent; anterior fovea external to the sulci much longer than usual, assuming the form of a second sulcus; antennæ as long as the elytra, fuscous, very gradually testaceous basally, the medial joints barely twice as long as wide; prothorax relatively small, a fifth wider than long, narrower at base than at the truncate apex; base three-fourths the maximum

width; sides strongly rounded anteriorly, becoming straight and parallel in basal sixth; foveæ deep, elongate-oval, adjoining the moderately distinct carina; punctures of the subbasal row coarse and distinct; median line generally more deeply impressed before and behind the middle; elytra distinctly less than one-half longer than wide, evidently wider behind the middle than at base, fully four-fifths wider than the prothorax; sides rather strongly arcuate, somewhat rapidly rounding at the humeri; striæ coarse but not much impressed, obsolete in apical third or fourth; punctures coarse, deep, separated by rather more than their diameters; seventh series strong, extending to the middle; foveæ at two and four sevenths. Length (♂ ♀) 2.3–2.6 mm.; width 0.7–0.9 mm. Rhode Island to Illinois, Iowa and Missouri (St. Louis). Abundant . . . **frontale** Lec.

Form not quite so ventricose, more parallel, nearly as convex, polished, deep black, the elytra not paler, with the posterior spot smaller, more marginal, united with the pale margin connecting it with the pale apex; legs piceo-testaceous; head barely visibly narrower than the prothorax, throughout nearly as in *frontale;* antennæ slightly shorter than the elytra, black, gradually pale basally, the medial joints twice as long as wide; prothorax shorter, two-fifths wider than long, in general outline and arcuato-truncate apex nearly as in *frontale*, but with the anterior impression sharper, deeper and entire from side to side, the subbasal impression deeper and more sharply groove-like, strongly punctate, the foveæ and carina nearly similar, but the abbreviated median stria is even throughout and moderately impressed; elytra more oblong, with more parallel and feebly arcuate sides, less than one-half longer than wide and only two-thirds wider than the prothorax; striæ not so coarse and continuing to apical fourth or fifth, the punctures smaller though very distinct, more close-set; foveæ nearly similar. Length (♂ ♀) 2.25–2.5 mm.; width 0.75–1.0 mm. California (Gualala River, Mendocino Co.) and Nevada (Reno). Four examples . . . . . **siticum** n. sp.

Form nearly as in *siticum* but more elongate, shining, brown in color in the type, with nearly similar posterior maculation; legs rufous; head distinctly narrower than the prothorax; antennæ fuscous, gradually testaceous basally, shorter than in either of the two preceding, scarcely three-fourths as long as the elytra, the medial joints evidently less than twice as long as wide; prothorax still more transverse, rather more than two-fifths wider than long; base narrower than the apex and fully three-fourths the maximum width; sides strongly rounded in anterior, oblique and sinuate in about posterior, half, becoming parallel in basal fifth; anterior impression shallow but evident, the posterior shallowly sulciform and punctate; foveæ shallower than in the preceding, the carina moderate, close to the edge; elytra longer, fully one-half longer than wide, scarcely more than one-half wider than the prothorax, subparallel, with feebly arcuate sides, rapidly rounded at the humeri; striæ moderate, obsolete in apical fourth, barely impressed suturad, the punctures strong, even, moderately well separated, traceable to about posterior third;

foveæ at two-sevenths and at the middle. Length (♀) 2.5 mm.; width 0.85 mm. California (Booneville, Mendocino Co.).
adolescens n. sp.

5—Antennæ notably thick and heavy. Body suboval and very convex, deep black and polished; elytra with apex and external spot near apical fourth, broadly joined to the apical area, pale, the pale areas very nubilous; under surface black, the legs bright rufous; head five-sixths as wide as the prothorax; sulci deeply impressed, straight, the external anterior impression short as usual; antennæ nearly as long as the elytra, black, the basal joint obscure rufous, the medial joints fully twice as long as wide; prothorax very convex, a third wider than long, the base two-thirds the maximum width and much narrower than the arcuato-truncate apex; sides evenly arcuate, becoming subparallel near the base, the angles sharp but more than right; margins unusually finely reflexed; anterior impression very feeble, the posterior distinct but obsolete medially; foveæ very small, elongate-oval, deep, the carina wholly wanting; elytra slightly over one-half longer than wide, three-fifths wider than the prothorax, parallel, with arcuate sides, gradually rounding at the humeri; striæ rather coarse, feebly impressed, obsolete on the declivity, the punctures strong and relatively coarse, widely to moderately separated; foveæ before basal and near apical third. Length (♀) 3.2 mm.; width 1.2 mm. Michigan (Marquette).....**umbraticum** n. sp.

Antennæ slender, the thoracic margins less finely reflexed, the carina at the hind angles rather long, distinct.....6

6—Prothorax distinctly transverse.....7

Prothorax but feebly transverse, never more than a fourth wider than long.....11

7—Head much narrower than the prothorax.....8

Head scarcely visibly narrower than the prothorax.....9

8—Body oblong-suboval, only moderately convex, polished, deep black; elytra with the apices nubilously pale, but without obvious trace of a posterior external spot; legs very nearly black, slightly piceous; head three-fourths as wide as the prothorax, the eyes rather prominent; sulci deep, the anterior external depression small, oval; antennæ only moderately slender as compared with all the following species, black, barely less so at base, three-fourths as long as the elytra, the medial joints scarcely twice as long as wide; prothorax not quite one-half wider than long; apex rectilinearly truncate, much wider than the base, the latter fully three-fourths the maximum width; sides subevenly rounded and well reflexed to the parallel basal part, which is a sixth the total length; impressions rather sharp and distinct, subentire, the stria distinct between them; foveæ rather long, very deep, oval, adjoining the distinct carina; elytra slightly over one-half longer than wide, scarcely more than two-fifths wider than the prothorax, parallel, with distinctly arcuate sides and moderately rounded humeri; striæ fine, impressed only suturad, obsolete at about apical fourth; punctures fine, moderately separated, less fine and close-set in the sutural series; foveæ near basal fourth and

at three-fifths. Length (♂) 3.1–3.25 mm.; width 1.23 mm. California (Lake Tahoe).....**scenicum** n. sp.

Body slightly narrower and more convex, the elytra shorter and more oval, deep black, shining, the elytra slightly brownish, each with a subexternal pale spot near apical fourth, the apex and lateral margin apically also pale; legs obscure rufous; head four-fifths as wide as the prothorax, the eyes moderate; antennæ scarcely three-fourths as long as the elytra, blackish, the first three joints in great part testaceous, the medial joints slightly more than twice as long as wide; prothorax barely two-fifths wider than long; base much narrower than the broad truncate apex and not quite three-fourths the maximum width; sides in about apical half parallel and moderately arcuate, thence very oblique to the subparallel basal part, which is nearly a fifth the total length; margins well reflexed; anterior impression very feeble, the posterior coarsely sulciform and punctate, abruptly interrupted at the middle; foveæ deep, rather large, elongate-suboval, adjacent to the long strong carina; elytra one-half longer than wide, three-sevenths wider than the prothorax, gradually parabolic behind, the subparallel sides feebly arcuate and the humeri moderately rounded; striæ coarse but only very slightly impressed, extending to the declivity internally, to the middle externally, the punctures coarse, deep and well separated; foveæ near fourth and three-fifths. Length (♀) 2.8–3.4 mm.; width 1.1–1.2 mm. Utah (Provo),—Wickham. Three examples..**clemens** n. sp.

9—Prothorax large, about three-fourths as wide as the elytra. Surface polished, black, with feeble æneous lustre, the elytra piceous, each with a nubilous external spot near apical fourth and the posterior part of the margin, barely attaining the suture, pale; under surface black, the legs pale piceo-testaceous; head large, barely visibly narrower than the prothorax, with prominent eyes, the sulci deep; antennæ scarcely three-fourths as long as the elytra, black, piceous at base, the medial joints fully twice as long as wide; prothorax fully two-fifths wider than long, but little wider just before the middle than at the broad truncate apex; base four-fifths the maximum width; sides moderately reflexed, moderately rounded anteriorly, arcuately converging posteriorly to the long subparallel basal part, which is fully a fifth the total length; angles right, as usual; anterior impression feeble, the posterior also broad, feeble and medially interrupted, nearly smooth; foveæ elongate-oval, deep and somewhat distant from the rather short but strong carina; elytra oblong, with arcuate sides and subcircular apex, slightly more than one-half longer than wide, the humeri somewhat broadly rounded though slightly exposed at base; striæ rather coarse but barely at all impressed, obsolete in apical fourth inwardly and half externally; punctures moderately coarse and rather well separated; foveæ at fourth and four-sevenths. Length (♀) 3.35 mm.; width 1.25 mm. Queen Charlotte Islands (Massett),—Keen. One specimen..**peregrinum** n. sp.

Prothorax relatively smaller, much less than three-fourths as wide as the elytra.....10

10—Form moderately narrow and convex, deep shining black through-

out, the elytra each with a very small pale spot near the side at about apical fourth, the apex nubilously and feebly pale, these posterior pale areas often wholly obsolete; under surface black, the legs blackish-piceous to dark rufous; head slightly though evidently narrower than the prothorax, with prominent eyes and deep sulci; antennæ slender, three-fourths as long as the elytra, black, the basal joint obscure rufous, the medial joints two and one-half times as long as wide; prothorax two-fifths wider than long; base but slightly narrower than the truncate apex and nearly four-fifths the maximum width; sides strongly rounded, arcuately oblique from about the middle to the rather short subparallel basal part, well reflexed; anterior impression distinct medially, the posterior broadly sulciform, punctate, obsolete at the middle; foveæ deep, oval, adjacent to the moderate carina; elytra oblong, with broadly arcuate sides, one-half longer than wide, nearly two-thirds wider than the prothorax, the humeri rapidly rounded, transverse internally at base; striæ moderately coarse, slightly impressed internally, obsolete in apical fourth, the seventh series very fine, not extending to the middle; punctures strong, well separated; foveæ as in *peregrinum*. Length (♂ ♀) 2.8–3.35 mm.; width 1.1–1.23 mm. California (Sta. Cruz to Mendocino). Fifteen examples.....**connivens** Lec.

Form stouter, moderately convex, polished, piceous-black, the elytra castaneous, generally without posterior paler maculation, but rarely with exceedingly vague traces of maculation like that of the two preceding; head fully four-fifths as wide as the prothorax, with large prominent eyes; antennæ nearly four-fifths as long as the elytra, blackish, paler at base, the medial joints more than twice as long as wide; prothorax distinctly larger than in *connivens*, but almost similar in general form and structure, two-fifths wider than long; elytra broader, nearly one-half longer than wide, barely one-half wider than the prothorax, parallel, with broadly arcuate sides, the humeri moderately rounded; apex rather more obtuse than in *connivens*, the striation and punctures nearly similar. Length (♂ ♀) 2.8–3.15 mm.; width 1.15–1.25 mm. California (Mt. Diablo to Mendocino Co.). Five specimens.....**vapidum** n. sp.

Form rather more ventricose, smaller, shining, pale red-brown in color throughout in the type, the head slightly more dusky; under surface and legs pale red-brown; head only just visibly narrower than the prothorax, the eyes moderate, prominent; antennæ almost similar, dusky, broadly testaceous basally; prothorax relatively smaller, a third wider than long; base distinctly narrower than the apex as in *vapidum;* sides strongly rounded from apex to the basal parallel part, which is nearly a fifth the total length; anterior impression subobsolete, the posterior a shallow entire punctured sulcus, arcuate in the middle but scarcely interrupted; foveæ deep, elongate, near the distinct carina; elytra relatively large, fully one-half longer than wide, two-thirds wider than the prothorax; sides parallel, moderately arcuate, the humeri as in *vapidum*, the striæ moderate, not impressed, except feebly suturad, obsolete only near the apex internally, more abbreviated laterally as usual, the seventh series extending to about

the middle; punctures strong, widely separated in some series, closer in others; foveæ near basal fourth and apical third. Length (♂) 2.8 mm.; width 1.15 mm. California (Sta. Barbara),—Dunn. The type is probably immature to some extent..... **disparile** n. sp.

11—Elytra without paler posterior maculation..... 12

Elytra with distinct posterior maculation..... 13

12—Body rather narrow and convex, feebly ventricose, polished, deep black throughout, the legs obscure rufous; head unusually developed, fully as wide as the prothorax, the eyes moderate in size but very prominent, the strongly converging sulci deep; antennæ three-fourths as long as the elytra, black throughout, thicker distally than basally, the medial joints obconic and distinctly less than twice as long as wide; palpi blackish; prothorax barely visibly wider than long, the base distinctly narrower than the truncate apex and three-fourths the maximum width; sides moderately rounded anteriorly, oblique in rather more than basal half, gradually sinuate basally, the angles right; anterior impression only medial and feeble, the posterior sulciform, entire, punctate; foveæ deep, elongate-oval, adjacent to the distinct carina; elytra one-half longer than wide, fully three-fifths wider than the prothorax, parallel, with arcuate sides and rapidly rounded humeri; striæ coarse but not impressed, except feebly suturad, obsolete in posterior fourth internally, to half externally; punctures coarse, deep and well separated; foveæ strong, at fourth and four-sevenths. Length (♂) 2.7 mm.; width 1.0 mm, California (Gilroy Hot Springs, Sta. Clara Co.). A single example. Resembles *vile* in general form and facies, differing greatly of course in the frontal sulci, which are parallel in *vile*, as noted from an inspection of the type..... **ampliceps** n. sp.

Body much stouter, strongly convex, polished, deep black throughout, the legs piceo-rufous; head but slightly though evidently narrower than the prothorax, the eyes larger than in *ampliceps* but less prominent; sulci very deep, the intermediate surface strongly convex; antennæ filiform, blackish, obscurely rufous at base, fully three-fourths as long as the elytra, the medial joints between two and three times as long as wide; prothorax scarcely a fifth wider than long; base narrower than the truncate apex though four-fifths the maximum width, widest near apical third, the sides moderately reflexed, evenly rounded, gradually converging behind and broadly sinuate, becoming gradually parallel in about basal sixth; anterior impression only medial but distinct, obtusely impressed, the posterior shallow, punctured laterally, obsolescent medially; median stria distinct, subentire; foveæ deep, oval, adjacent to the carina, which is well developed though close to the edge; elytra one-half longer than wide, fully three-fifths wider than the prothorax, parallel, with arcuate sides and very gradually rounded humeri, becoming transverse for only a very short distance near the thoracic base; striæ rather fine, not impressed, except feebly toward the suture, obsolete at a slight distance behind the middle; seventh series only visible in basal third; punctures fine, well separated; foveæ small, at fourth and

four-sevenths. Length (♂) 3.25 mm.; width 1.25 mm. California (Lake Tahoe).....**tersum** n. sp.

13—Elytral striæ distinct and distinctly punctured to the summit of the declivity. Body moderately slender, convex and ventricose, polished black, the elytra with feeble piceous tinge and with the apex and a large external posterior spot pale, the two united along the margin; under surface black, the epipleura piceo-rufous, the legs rufous; head five-sixths as wide as the prothorax, of the usual structure; antennæ three-fourths as long as the elytra, fuscous, gradually rufous basally, the medial joints slightly more than twice as long as wide; prothorax a fifth or sixth wider than long; base distinctly narrower than the truncate apex and fully three-fourths the maximum width; sides rounded anteriorly, well reflexed, converging and becoming sinuate posteriorly, subparallel for some distance from the angles, which are sharp, slightly more than right; anterior impression subobsolete, the posterior broad, punctulate, obsolete medially, the stria fine, not quite entire; foveæ rather large, deep, oblong, adjacent to the carina, which is long and strong; elytra parallel, with arcuate sides and rather rapidly rounded humeri, one-half longer than wide and two-thirds wider than the prothorax; striæ rather coarse, barely visibly impressed, obsolete in apical fourth, the seventh in half; punctures rather coarse, deep, moderately separated, distinct to the ends of the striæ; foveæ near fourth and two-thirds. Length (♂) 3.1 mm.; width 1.18 mm. New Mexico (road between Fort Wingate and Jemez Springs),—Woodgate.....**invidiosum** n. sp.

Elytral striæ barely at all traceable behind the middle.....14

14—Form moderately slender, convex, deep black, shining, the elytra with subnubilous posterior pale maculation as in the preceding; legs piceo-rufous; head not distinctly narrower than the prothorax, with rather large and prominent eyes and the usual deep sulci, the inter-sulcal surface obtuse at tip, however, and not so acute as in some other species; antennæ three-fourths as long as the elytra, more slender, black, the basal joint rufous, the medial joints two and one-half times as long as wide; prothorax a fifth or sixth wider than long; base distinctly narrower than the truncate apex and three-fourths the maximum width; sides rather narrowly but strongly reflexed, evenly rounded from apex to the parallel basal part, which is a fifth the total length; anterior impression only medial, broadly concave, the posterior reduced to a small impression at each side of the middle; foveæ deep, narrow, sublinear, not adjacent to the carina, which is distinct; elytra three-fifths longer than wide, fully two-thirds wider than the prothorax, parallel, with slightly arcuate sides and somewhat gradually rounded humeri; striæ fine, scarcely impressed, consisting simply of series of fine and widely separated punctures, sometimes a little coarser basally behind the humeri; foveæ near two and four sevenths. Length (♂) 3.25 mm.; width 1.25 mm. Illinois (Highland Park) and Michigan (Marquette).
habile n. sp.

Form rather more ventricose, convex, the hind body shorter, polished, piceous, the elytra black, each with a small but well defined lateral

pale spot, remote from the margin, at apical fourth, the lateral margin pale from behind the middle nearly but scarcely to the suture; head five-sixths as wide as the prothorax, with moderate eyes, the inter-sulcal apex rather acute; antennæ fusco-testaceous, clearer basally, three-fourths as long as the elytra, the medial joints slightly more than twice as long as wide; prothorax barely a fifth wider than long; base much narrower than the truncate apex and barely three-fourths the maximum width, the sides moderately reflexed, strongly rounded anteriorly, gradually converging and less arcuate posteriorly to the rather abruptly defined parallel or subdiverging basal part, which is a fifth the total length; angles right; anterior impression obsolete, the posterior a punctured entire sulcus, the surface between which and the base is somewhat convex; foveæ rather small, deep, rounded, adjacent to the moderate carina; elytra scarcely one-half longer than wide, subparallel, with arcuate sides and rather rapidly rounded, broadly basally exposed humeri, two-thirds wider than the prothorax, convex; striæ not coarse, feebly impressed suturad, obsolete in apical third inwardly to three-fifths externally; punctures small but deep and distinct, very widely separated in the series; foveæ at fourth and four-sevenths. Length (♂) 3.2 mm.; width 1.25 mm. California (Paraiso Hot Springs, Monterey Co.).
remotum n. sp.

On examining the careful description of the European *Bemb. assimile* Gyll, given by Duval (Rev., 1851, p. 168), I find so decided a discordance with our *frontale* Lec., now in our lists under the name *assimile*, as to excite wonderment at the change of name; the elytra in *assimile* are of obscure bluish or greenish lustre, with the usual posterior maculation; they are coarsely striate and coarsely punctured, and the fact that they sometimes exhibit evidences of vague anterior maculation, shows that there is an essential difference, but the most important difference is in the dimensions of the body; *frontale* is one of the most minute species of the genus, while the length of *assimile* is 3.2–3.5 mm., indicating materially greater size. The Pacific coast forms said to be *frontale* by Mr. Hayward, are altogether different specifically, and that author included a very confusing mixture of distinct species under his conception of *anguliferum* Lec., founded originally upon a unique taken near San Francisco, to which region the species is unquestionably confined. I have nothing approaching it very closely; it is of rather large size for this subgenus—3.75 mm., if the published measurement of LeConte is to be relied upon.

The species described above under the name *scenicum*, is probably allied rather closely to *acutifrons* Lec., described as from Alamosa,

Colorado, and 3 mm. in length, judging at least by the blackish-piceous legs, said to be black in *acutifrons*, but the prothorax in *scenicum* is probably much more transverse. In *cautum* Lec., of the Rocky Mountains, the prothorax is said to be no wider than the head, the legs pale and the elytra deeply striato-punctate; it is probably related remotely to *tersum*, from Lake Tahoe, the latter differing very much in the feeble unimpressed striation and in its darker legs. *Umbraticum* is remarkable in having no trace of the very constant carina of the hind thoracic angles.

Amerizus Chd.

There can be but little question that this is a valid genus and not a mere group of *Bembidion;* this is rather conclusively proved by the subanchylosed external maxillary lobe. In the facies of the species it truly approaches the *trechiforme* group of *Bembidion*, but this resemblance, I am convinced, is largely superficial, as is its still stronger similitude with some forms of *Trechus*, but, as if to accentuate the possible affinity with *Trechus*, the last joint of the labial palpi is often elongated to a degree probably unknown in *Bembidion;* in most of the species it is in fact fully half as long as the penultimate joint and sometimes longer. It is to be admitted, however, that in the greater part of its organization it is very closely allied to *Bembidion*, having the same male tarsal characters, and relationships of the sclerites of the under surface, but it differs greatly in the small and but slightly prominent eyes, with correspondingly greater space separating the eyes from the broad, shallow and parallel frontal sulci. The mentum tooth is well developed and sharply triangular. The elytral foveæ are on the third interval. The species are moderately numerous, and those before me may be defined as follows:

Sides of the pronotum steeply sloping, the edge very finely reflexed. Body subparallel, moderately convex, piceous-black, rather shining, the head feebly micro-reticulate, the pronotum and elytra with very fine and close-set wavy strigilation, visible only under rather strong magnification; under surface of the hind body and the legs rufous; head orbicular, somewhat longer than wide, three-fourths as wide as the prothorax; antennæ very thick, filiform, clear testaceous throughout, three-fourths as long as the elytra, the medial joints twice as long as wide, cylindric; prothorax between a third and fourth wider than long, widest near anterior third; base slightly wider

than the broadly sinuate apex and four-fifths the maximum width; sides evenly rounded from the rather sharp apical angles to the parallel basal part, which is nearly a fourth the total length; anterior impression obsolete; base depressed and punctate throughout; stria deeply impressed, subentire; foveæ large, broadly impressed, shallow and punctate, the carina rather long and strong; angles right; elytra slightly opalescent, more than three-fifths longer than wide, a third wider than the prothorax, parallel, with arcuate sides and very gradually rounded humeri; striæ fine, feebly impressed, entire, with more or less evident traces of fine and very irregular punctulation; foveæ before basal and before apical third, separated by fully two-fifths the total length. Length (♂) 4.3 mm., width 1.6 mm. British Columbia (Inverness),—Keen. . . . . **crassicornis** n. sp.

Sides of the pronotum less steeply sloping, the edge rather widely and strongly reflexed; minute sculpture as in the preceding, feeblest in *keeni;* antennæ not so thick; elytral foveæ differing conspicuously in being very much more approximate, separated by a fifth to seventh the total length 2

2—Larger species, the legs obscure rufous, with blackish femora. Upper surface piceous-black, moderately shining; under surface piceous; head orbicular, rather wider than long, three-fourths as wide as the prothorax; antennæ fusco-testaceous, filiform, rather thick, three-fourths as long as the elytra, hairy as usual, the medial joints between two and three times as long as wide; prothorax about two-fifths wider than long; base transversely truncate as usual, rather wider than the transverse bisinuate apex, four-fifths the maximum width, widest at two-fifths from the apex; sides evenly rounded from apex to the broad basal sinuation, becoming parallel near the angles; anterior impression very feeble; base with scattered punctures, but feebly depressed medially; foveæ very large and broad, deeply concave, the carina distinct, forming one side of the fovea as usual; median stria coarse and deeply impressed, very coarse and deep basally; elytra broad, with parallel and strongly arcuate sides, one-half longer than wide, about one-half wider than the prothorax; striæ entire, though becoming very feeble at tip, moderately fine, impressed. the irregular punctulation barely evident; foveæ asperate, at three and four sevenths. Length (♀) 6.3 mm.; width 2.65 mm. British Columbia (Inverness),—Keen. [*Trechus spec.* Mann.]. **spectabilis** Mann.

Smaller species and more slender, the legs rufous throughout 3

3—Sides of the prothorax distinctly sinuate basally, becoming parallel in about basal fifth, the hind angles right and very sharp. Body elongate-suboval, convex, moderately shining, piceous-black, the under surface obscure, the legs bright, rufous; head orbicular, as wide as long, fully three-fourths as wide as the prothorax, the sulci broad as usual; antennæ long, pale testaceous, nearly as long as the elytra, the medial joints slightly obconic and almost three times as long as wide; prothorax scarcely a fourth wider than long, barely visibly wider at base than at apex, the latter rather deeply sinuate, with well marked angles; sides rather widely and strongly reflexed,

broadly, evenly arcuate from apex to the parallel basal part; anterior impression obsolete, the posterior broad and shallow but entire, with scattered punctures; stria subentire, broadly and deeply impressed, especially toward base: foveæ broadly and moderately impressed, elongate and well separated from the distinct carina, though the general concavity extends to the latter; elytra three-fifths longer than wide and one-half wider than the prothorax, the parallel sides arcuate, gradually rounding at the humeri; striæ entire, deeply impressed throughout and impunctate, feebly and irregularly so laterad; side margins well reflexed; foveæ simple, very small, before basal third and at three-fifths. Length (♂) 5.5 mm.; width 2.2 mm. California (Sta. Cruz Mts.).....**longicornis** n. sp.

Sides of the prothorax broadly and very feebly sinuate posteriorly, not becoming parallel, the angles obtuse but not rounded. Body narrower, with relatively larger prothorax, less ventricose, piceous-black to rufo-piceous, rather shining; under surface and legs rufous; head three-fourths to four-fifths as wide as the prothorax, the antennæ testaceous, the medial joints two and one-half times as long as wide; prothorax a third wider than long, the deeply sinuate apex usually not as wide as the base; sides well reflexed, broadly and rather strongly arcuate, converging in about half; base with a few scattered punctures; anterior impression obsolete, the posterior obsolete medially, the subentire stria rather fine, but becoming broadly and deeply impressed basally; foveæ large, broadly and deeply impressed, the deeper part somewhat distant from the distinct carina; elytra oval, three-fifths longer than wide, three-sevenths wider than the prothorax, the sides arcuate, gradually rounding basally, the humeri moderately exposed at base; striæ entire, rather fine, feebly or very moderately impressed, especially externally, where there is some feeble sparse irregular strial punctulation; foveæ near three and four sevenths, sometimes slightly less approximate. Length (♂) 4.5–4.7 mm.; width 1.7–1.75 mm. British Columbia (Metlakatla),—Keen. Two specimens.....**keeni** n. sp.

The species described by Mannerheim under the name *Trechus oblongulus* is, because of the extremely finely margined prothorax, evidently allied to *crassicornis* of the above table, but differs in its rufo-testaceous color and by the thoracic base being somewhat narrower than the apex; the elytra, also, are described as deeply punctato-striate, which would not suit *crassicornis* at all; it is 4 by 1.7 mm. in dimensions and occurs in the Island of Sitka. Mr. Hayward makes the name apply to various forms found in Canada, the White Mts., Massachusetts, Ohio and even Mexico, including the species described by Bland as *Bemb. wingatei.* The latter is piceous, the head dark rufous, smooth and shining, the antennæ hairy, rufo-fulvous and more than half as long as the body; pro-

thorax subcordate, blackish, very smooth and shining, the anterior and posterior margins dark rufous, the stria well impressed, the base with a few scattered punctures; foveæ deep and rounded, the hind angles rather prominent; elytra oblong, shining, piceous, tinged with rufous at base and apex, the surface flattened, the foveæ "on the third stria," one before the middle, the other at posterior third; striæ "neatly" punctured, well impressed at base, becoming obsolete at tip, the intervals slightly convex; the under surface is dark brown, shining, the abdominal segments reddish-brown, paler toward apex; legs rufo-fulvous. The length is 5 mm., and the type was taken at Bellefonte, Centre Co., Pennsylvania. The punctured elytral striæ would seem to suit *oblongulus*, but it differs in color and in its materially larger size. The flattened elytra and punctured striæ will not fit *crassicornis* in any way. There can be but little doubt that *wingatei* is a valid species, and possibly of this genus, though the elytral striæ and position of the foveæ as described, are not conformable, but of this I could form no opinion in the absence of typical specimens. I have seen no examples of true *Amerizus* taken anywhere except near the Pacific coast-line.

Anillus Duval

The members of this genus are all very small, rather slender and subdepressed to convex, pallid in color and completely devoid of eyes; they inhabit caves or other dark retreats and are not common in collections.

Those species of *Anillus* actually known to me by material at hand are assignable to three very distinctly characterized subgenera as follows:

Second ventral segment shorter than the next two combined, separated laterally from the first—which extends entirely across the abdominal base—by an anchylosed suture; mental sinus small, deep, the tooth triangular; mandibles short, regular, arcuate; sides of the head margined above as usual; antennæ short, the joints abbreviated, the second nearly as long as the next two combined; elytra not explanate at the sides, the lateral margin broadly and feebly serrate basally. [Type *A. carolinæ* nov.] Atlantic regions of North America. . . . . **Anillinus** n. subgen.

Second ventral segment very large, occupying half the abdomen, the first only visible at the sides; mental sinus broad and shallow, the tooth small, acicularly prolonged at apex; antennæ longer, the joints elongate-oval, the second somewhat longer than the third and asym-

metrically though feebly inflated; lateral margins of the elytra more distinctly serrate basally.....2

2—Mandibles broad, their outer margin strongly angulate; elytra not explanate at the sides. [Type *A. cœcus* Duv.] Europe.
*Anillus Duval

Mandibles long, thin and nearly straight, their outer margin feebly and evenly arcuate; elytra explanate at the sides. [Type *A. explanatus* Horn]. Pacific coast of North America.....**Anillaspis** n. subgen.

The typical species of the first of these subgenera may be described as follows:

Anillinus carolinæ n. sp.—Narrow, elongate-suboval, strongly convex, shining, pale testaceous throughout; head three-fourths as wide as the prothorax, polished, as long as wide, the impressions short and anterior; antennæ about as long as the head and prothorax, the latter not quite a third wider than long, widest at anterior third, the sides rounded, straighter and feebly crenulate basally; apex sinuato-truncate, barely visibly wider than the base; subbasal impression deep, broadly angulate; median line distinctly impressed, obsolete at apex; elytra nearly three-fifths longer than wide, a third wider than the prothorax, elongate-oval, very coarsely reticulate, the first stria distinct, the second feeble and disintegrated; sides with a medially interrupted series of widely separated ocellate foveæ. Length 1.6 mm.; width 0.48 mm. North Carolina (Black Mts.),—Wm. Beutenmüller. Four specimens.

It is possible that *fortis* Horn, from almost this identical locality, may be allied rather closely to *carolinæ*, but the base and apex of the prothorax in the latter are subequal in width as in *dohrni* Ehlers, from Florida. It is difficult, besides, to understand how any such name as *fortis* could be applied to the very minute *carolinæ*. The head in *fortis* is said to be alutaceous and to have a longitudinal impression at each side; the length is given as 2 mm. My single specimen of *explanatus* Horn, was taken in Placer Co., California.

Lymneops n. gen.

This singular genus combines some of the characters of the typical Bembidiids and the *Tachys* group following, and especially in the absence of the scutellar stria, so uniformly present in all the preceding genera, but wanting in *Tachys* and all related groups. The outer maxillary lobe is of peculiar structure, the segments are not anchylosed, but the penultimate is arcuate, pedunculate basally and swollen apically; the longer following segment is attached obliquely, so as to form an angle but slightly greater than right, and

it is slightly bent. The mentum tooth is well developed and rather strongly triangular. The eyes are small and but very feebly convex, the sulci broad, shallow, parallel and remote from the eyes and the posterior thoracic angles are without trace of carina; the elytral striæ, apparently only five in number, are somewhat irregularly and broadly, feebly impressed. The gutter at the sides of the elytra has a series of small tuberculiferous setigerous punctures posteriorly and three or four toward base. The dorsal foveæ are broadly impressed, the posterior on the third stria and the anterior between the third and fourth striæ, as in true *Tachys*. The legs, antennæ and palpi are normally Bembidiid, but the penultimate joint of the labial is short and very thick. The following is the only species at present in my collection; it may be regarded as the generic type:

Lymneops angusticeps n. sp.—Rather narrow, elongate and depressed, alutaceous and micro-reticulate throughout, pale red-brown, each elytron with a large elongate discal fuscous cloud, wholly undefined; legs and under surface ferruginous; head much narrower than the prothorax, rather longer than wide; antennæ thick and heavy though filiform, as long as the elytra, ferruginous, the medial joints not quite twice as long as wide; prothorax a third wider than long, the feebly sinuate apex much wider than the base and barely visibly narrower than the maximum width at anterior two-fifths; base three-fifths the maximum; sides well reflexed, parallel and slightly arcuate anteriorly, oblique in about posterior half, sinuate basally, becoming subparallel in basal fifth or sixth; surface but feebly convex; anterior impression subentire, feeble, the posterior broad and very shallow; stria rather strong, biabbreviated; foveæ small, shallow, distant from the angles, which are right and sharp; elytra parallel, oblong-oval, one-half longer than wide, a third wider than the prothorax, the sides broadly arcuate, somewhat widely reflexed, very gradually rounding at the humeri; foveæ rather strong, near basal and apical third. Length (♂) 2.8–3.0 mm.; width 0.85–1.1 mm. California (San Pedro).

The anterior tarsi in both male examples at hand are peculiarly broad, with the joints decreasing regularly in width and transverse, the first joint quadrate; in the female the first joint is probably longer and more slender.

The species described by LeConte (Pr. Acad. Phila., 1858, p. 61) under the name *Lymnæum laticeps*, evidently belongs to this genus, resembling *angusticeps* in general features, but is somewhat larger, 3.5 mm. in length, piceous in color above, and has the prothorax not at all wider than the head; the fifth stria is long, deep and ob-

lique at apex in both; *laticeps* was described from a single specimen taken at San Diego.

Pericompsus Lec.

While evidently belonging to the *Tachys* series in general features of structure, this genus is so distinct in habitus, system of sculpture and in many other minor directions, that its inclusion with normal *Tachys* by Mr. Hayward as a simple group, is rather inexplicable. The genus extends geographically from the colder parts of North America far into South America, and will probably prove to be moderately large; a number have been described by Bates from the southern faunas. It does not occur in the true Pacific coast fauna, though represented in the neighboring Sonoran regions. There are three well defined subgeneric groups as follows:

Head obliquely prolonged behind the eyes, the latter setose; antennæ long, the second joint scarcely as long as the third; anterior thoracic angles acute and anteriorly prominent; elytra explanate at the sides. I (*sellatus*)

Head abruptly constricted behind the eyes, which are nude, or nearly so; antennæ shorter; anterior thoracic angles not prominent; elytra not explanate at the sides 2

2—Elytra oval, gradually narrowly rounded behind; prothorax narrow; second antennal joint long, equal in length to the third. II (*ephippiatus*)

Elytra longer, parallel, obtuse at apex; prothorax transverse; second antennal joint a little shorter than the third, but subequal in length to the first; eyes with some exceedingly minute setæ; elytra microreticulate. . . . . III (*lætulus*)

The first of these groups is purely Sonoran, the second widely distributed from the northern Atlantic regions to South America, and the third is represented by several species from Arizona to southern Mexico.

Group I—*sellatus*

Subgenus **Pericompsus** in sp.

The remarkably distinct habitus, opaque lustre, strong sculpture, posteriorly prolonged head, thoracic structure, long antennæ and widely deplanate sides of the elytra, seemed at first sufficient ground for full generic separation from the other two groups, but there are certain characters common to all the groups, such as the

conspicuous mental foramina and the six entire punctate elytral striæ, that may be deemed sufficient to hold them together generically. We have but a single species of this subgenus as follows:

Body elongate, ventricose, ferruginous, subopaque, the elytra each with a fine darker irregular oblique discal line meeting the suture posteriorly, and behind which the surface is more flavate: head distinctly narrower than the prothorax, somewhat elongate, the eyes moderate, convex; sulci narrow, parallel, remote from the eyes, the orbital puncture minute and distant from the eye; antennæ fully as long as the elytra, ferruginous, slender basally, incrassate distally, the fifth joint nearly three times as long as wide, the tenth but slightly elongate; prothorax fully as long as wide; base arcuate, four-sevenths the maximum width, much narrower than the broadly sinuate apex; sides broadly reflexed, strongly arcuate anteriorly, oblique from before the middle, sinuate basally, somewhat diverging at the subprominent angles; surface convex along the middle, rugulose, the anterior impression shallow, medial and foveiform, the posterior obsolete, represented by a row of punctures; foveæ rather large and deep, elongate-oval; stria fine, subentire; carinæ wanting; elytra one-half longer than wide, four-fifths wider than the prothorax, oval, gradually acutely ogival behind, the humeri obtusely rounded, the striæ coarse, deeply impressed and approximate, the punctures not coarse but strong and close-set in the sulci, the seventh wholly wanting; eighth with the widely separated foveæ very coarse, deep and conspicuous; at the junction of the third and fifth striæ there is a sunken tuberculiform setigerous puncture, from which to the apical margin there is a slender carinate channel; dorsal foveæ very small, on the third interval at fourth and half. Length (♂♀) 2.7–3.2 mm.; width 1.0–1.2 mm. California (Yuma Reservation); also on the Arizona bank of the Colorado River opposite.....**sellatus** Lec.

I found this species in abundance in hoof-prints in the sand of the river bank, under fallen leaves. In the male the anterior tarsi are short, the basal joint short, though not evidently dilated; in the female the tarsus, and especially its basal joint, is distinctly longer than in the male. These tarsal characters are probably analogous to those of *Lymneops*.

Group II—*ephippiatus*

Subgenus **Tachysops** nov.

The habitus of the body in this subgenus is notably different from that of the preceding group, in being more oval, convex, polished, with evenly convex prothorax, the anterior angles of which are not prominent, in the less posteriorly prolonged head and other

features. The hind thoracic angles are not carinate. There are two species at hand as follows:

Body suboval, rather strongly, evenly convex, polished, not at all reticulate, flavo-testaceous, the elytra having a common large central black spot, the suture thence to the tip also often narrowly dusky; head fully three-fourths as wide as the prothorax, the eyes large, rather prominent, the sulci broadly impressed, not far from the eyes, the larger orbital puncture moderate; antennæ rather slender, but feebly incrassate distally, scarcely two-thirds as long as the elytra, the medial joints more than twice as long as wide; prothorax about a sixth wider than long; base slightly narrower than the subtruncate apex and four-fifths the maximum width; sides narrowly and slightly reflexed, broadly rounded in anterior, oblique in posterior, half sinunate posteriorly, becoming parallel at base; angles right, not carinate; anterior impression obsolete, the posterior an entire impressed series of punctures; foveæ small, feeble; stria very fine, incomplete; elytra one-half longer than wide, fully three-fourths wider than the prothorax, oblong-oval, gradually pointed or ogival behind; sides arcuate, the humeri rather rapidly rounded; striæ entire, rather fine, feebly and subequally impressed, finely and somewhat closely punctate, the seventh wanting; fifth stria with a short apical groove; foveæ very small, axial on the third interval near two and four sevenths. Length (♂ ♀) 2.3–2.7 mm.; width 0.8–1.0 mm. Indiana to Louisiana. [*T. elegantulus* Laf.]..... **ephippiatus** Say

Body slightly shorter and more ventricose, strongly convex, highly polished, pale testaceous in color, each elytron with an oblong central black spot, behind which there is a large rounded flavate area, these two flavate spots separated by a blackish sutural area, which is finely and obliquely connected with the central black areas; head with well developed eyes, five-sixths as wide as the prothorax; antennæ testaceous, scarcely two-thirds as long as the elytra, slender basally, incrassate distally, the medial joints less than twice as long as wide; prothorax about as long as wide, the truncate apex slightly wider than the base, which is four-fifths the maximum width; sides moderately rounded anteriorly, broadly, feebly sinuate toward the sharp right basal angles; anterior impression obsolete, the posterior a shallow punctate sulcus before the basal bead, the foveæ small and feeble; margins very finely reflexed, the surface sloping more steeply at the sides than in the preceding; elytra one-half longer than wide, fully four-fifths wider than the prothorax, gradually acutely ogival in about apical half, the humeri rapidly rounding; striæ coarse, feebly impressed suturad, obsolete in apical third; punctures coarse, widely separated in the series, the seventh wholly obsolete; foveæ very small, before basal third and well behind the middle. Length (♂ ♀) 2.1–2.2 mm.; width 0.8 mm. Mexico (Frontera, in Tabasco), —Townsend. Three examples..... ***oculaticauda** n. sp.

The species described as *oculaticauda* differs distinctly from any Mexican species mentioned by Bates. *Pericompsus histrionellus*

Bates, from Panama, also belongs to this subgenus and probably some others of the decribed species.

Group III—*lætulus*

Subgenus **Tachysalia** nov.

The form of the body in this subgenus is quite different from that observable in either of the two preceding, the elytra being long and parallel and the prothorax transverse; the elytra have the microreticulation characterizing *sellatus*, but the anterior parts are only obsoletely reticulate and, in the Mexican *longulus* of Bates, even the elytral reticulation becomes feeble. The prothorax differs also from that of the preceding, in having a distinct though short carina at the basal angles, as in most of the genus *Bembidion*. In general facies *Tachysalia* reminds us of some minute Bradycellids. As in the two preceding, sexual modifications of the anterior tarsi are slight. The type may be described as follows:

Form elongate, parallel, moderately convex, shining, the elytra feebly alutaceous, testaceous in color, the elytra with a large dusky oblong common cloud, tending to expand only slightly behind; head fully three-fourths as wide as the prothorax, with well developed and prominent eyes, the sulci moderate, the larger orbital puncture feeble; antennæ notably short, barely longer than the head and prothorax, gradually incrassate distally, the medial joints one-half longer than wide; prothorax two-fifths wider than long, widest at apical third; base slightly narrower than the subtruncate apex and more than four-fifths the maximum width; sides narrowly explanato-reflexed, moderately rounded anteriorly, oblique in more than basal half, becoming broadly sinuate basally, the angles right; anterior impression nearly obsolete, the posterior an entire punctate shallow sulcus, before the broad feeble basal bead, the foveæ rounded, moderately deep; elytra two-thirds longer than wide, two-fifths wider than the prothorax, almost twice as long as the head and prothorax, parallel, with almost straight sides and obtusely rounded apex, the humeri circularly rounded to the thoracic base; marginal gutter deep, with moderate foveæ; striæ fine, entire, the intervals nearly flat; punctures very fine, shallow and close-set; foveæ at one-fourth and three-fifths. Length (♂♀) 2.6–2.65 mm.; width 0.83 mm. Arizona (near Benson),—Dunn. . . . . **lætulus** Lec.

The Mexican *longulus* Bates, resembles *lætulus* very closely in outline, but the disk of the pronotum, sometimes narrowly divided, is black, and the oblong black elytral spot is dilated posteriorly to the marginal gutter; the strial punctures are less fine and not so close-set.

Paratachys n. gen.

The few known species of this genus resemble *Tachys* much more closely than *Pericompsus*, being depressed, with similar integument, similar position of the dorsal foveæ of the elytra on the fourth interval, almost punctureless elytral striæ, and with the mental foramina not much larger than in *Tachys*, but they differ from the latter in the parallel form of the body and entire eighth elytral stria, and not only from that genus but *Pericompsus* also, in having seven discal striæ, very fine and feeble it is true, but easily observable by properly reflected light. The two species before me, of which the first should be regarded as the type, may be described as follows:

Form subparallel, rather shining, pale brownish-flavate throughout, the head in part slightly dusky; head fully three-fourths as wide as the prothorax, with moderate and rather prominent eyes, short, anterior and widely separated sulci and rather approximate superciliary punctures; antennæ pale flavate, heavy, two-thirds as long as the elytra, the medial joints less than twice as long as wide, the second much longer than the third; prothorax four-fifths wider than long, equally wide at base and apex, the sides narrowly reflexed, more so at base, broadly rounded anteriorly, oblique in about basal half, becoming sinuate, parallel for some distance before the sharp right angles, the base transverse; subbasal impression obtusely subangulate, rather deep, the stria distinct, extending almost to the apex; elytra nearly three-fifths longer than wide, barely a third wider than the prothorax, circularly rounded in apical third, the sides parallel and nearly straight; humeri sharply rounded; striæ fine but distinct internally, very feeble on the flanks, very obscurely micro-punctulate; anterior fovea rather deep, near basal third. Length 2.0 mm.; width 0.7 mm. Texas (Austin). . . . . **austinicus** n. sp.

Form still narrower, subparallel, rather depressed and very shining, the minute sculpture subobsolete, barely traceable on the elytra; color pale flavo-testaceous throughout; head nearly three-fourths as wide as the prothorax, the eyes small, slightly prominent; sulci short, narrow and very widely separated; antennæ rather thick, flavate, scarcely three-fourths as long as the elytra, the medial joints not twice as long as wide, the second slightly though evidently longer and thicker than the third; prothorax short, very nearly twice as wide as long, equally wide at base and apex; sides strongly rounded anteriorly, oblique posteriorly and becoming parallel near the right, sharp and reflexed basal angles; subbasal groove deep, subangulate; elytra fully one-half longer than wide, but little more than a third wider than the prothorax, parabolic in apical third, parallel, with scarcely arcuate sides, the humeri distinct and sharply rounded; pedicel almost half the basal width; striæ one and two distinct but

not coarse, subequal, the third feeble, four to seven very feeble; anterior fovea barely behind basal third. Length 1.7 mm.; width 0.63 mm. Isthmus of Panama (Colon),—Beaumont. . . ***colonicus** n. sp.

These two species are closely allied, but *colonicus* is smaller, still narrower and rather less parallel than *austinicus*, with relatively somewhat smaller head, prothorax and eyes, and with the anterior thoracic angles more broadly rounded, being in fact completely obliterated; in *austinicus* they are very obtusely rounded but not entirely obliterated.

It may be that the *Tachys multistriatus*, mentioned but not described by Motschulsky (Etudes, 1855, p. 13 and 1862, p. 29), may belong to the present genus.

Tachyura Mots.

Barytachys Chd.

There seems to be some confusion in regard to the exact application of this generic name, but it appears sufficiently evident that it must be identified with the genus subsequently described under the name *Barytachys* by Chaudoir. At any rate, it is an exceedingly well defined genus, not at all like *Tachys*, either in habitus or structure, and is in North America the largest genus of the *Tachys* series. The body is oval, highly polished and very convex, in marked contrast to the flattened form and usually less polished surface characterizing the genus *Tachys*, and the mentum has no trace of the two foramina of that genus. These foramina, discovered by the writer when describing *T. occultator*, were used by Mr. Hayward subsequently in his group division of *Tachys*. In the present genus there are no closed pits or foramina on the mentum, but sometimes there are feeble indentations and, in the case of *frontalis*, which is evidently a true *Tachyura*, Mr. Hayward has, under inadequate magnification, mistaken these slight indentations for foramina and made a separate group of *frontalis*. I infer this, at least, because of the entire conformity of the body in *frontalis* with *Tachyura* in every respect, and because in the drawing of the mentum, the supposed foramina are not closed but open in front, a condition never observable in the true foramina of *Tachys* or *Pericompsus*.

In *Tachyura* the head is generally notably small, the eyes well

developed and prominent, the anterior superciliary fovea large and the second antennal joint shorter than the third, as usual in the subfamily. The integuments are smooth and polished, the hind thoracic angles have a very short carina and the posterior transverse impression is arcuate and sulciform laterally, generally interrupted medially, where there may be one or sometimes three isolated punctures. The mentum tooth is very short and obtusely triangular. The elytra are notably smooth and convex, the discal striæ biabbreviated and one to three or four in number; the lateral stria is very coarse, impressed and with setigerous foveæ but widely and completely interrupted submedially. The striæ are very smooth and devoid of any kind of punctuation, except as noted in the table below. The anterior tarsi are subject to sexual modifications somewhat as in *Bembidion*. The species are numerous and but few have been described hitherto; as represented in my cabinet they may be known as follows:

Elytra each with a single stria, outside of which there may be sometimes a second, which however is always excessively fine and only traceable under special angle of illumination.....2

Elytra each with two striæ, the second feebler than the first and biabbreviated, but always distinct, impressed and easily observed.....14

Elytra each with several striæ, some or all of which may be occasionally punctate.....20

2—Color pale flavo-testaceous throughout, the body notably narrow and elongate as a rule, stouter in *mellita*.....3

Color darker, the body more abbreviated.....6

3—Sutural stria attaining the base.....4

Sutural stria not attaining the base by a considerable distance.....5

4—Body oblong-oval, broader than in the three following, strongly convex, very shining, uniform pale honey-yellow in color; legs flavate; head small, scarcely two-thirds as wide as the prothorax, the sulci very short, feeble; eyes moderate, prominent; antennæ three-fifths as long as the elytra, very slender basally, gradually somewhat incrassate distally, the sixth joint twice as long as wide, the first three polished and only sparsely setose; prothorax two-fifths wider than long, very much wider at base than at the truncate apex; sides moderately rounded and reflexed, widest just before the middle, having three punctures before the basal beading; foveæ shallow; elytra three-fifths longer than wide, gradually sharply ogival in apical two-fifths, fully two-fifths wider than the prothorax; humeri broadly and gradually rounded to the thoracic base. Length 2.2–2.7 mm.; width 0.9–1.1 mm. Mexico (Tepehuanes, Durango),—Wickham.

***mellita** n. sp.

Body smaller and much narrower, pale testaceous, polished; head two-

thirds as wide as the prothorax, the eyes very moderate in size and prominence; frontal sulci obsolete; antennæ three-fifths as long as the elytra, nearly as in the preceding, the joints rather shorter, the sixth less than twice as long as wide; prothorax much smaller, two-fifths wider than long, widest barely before the middle, the sides broadly rounded, straight basally, moderately reflexed; base much wider than the apex; median part of the subbasal sulcus with three large punctures, not always clearly defined; foveæ small but rather deep; medial stria imperfect and extremely feeble; elytra three-fifths longer than wide, two-fifths wider than the prothorax, more rapidly arcuately ogival in apical third; humeri gradually rounding; foveæ near basal third and three-fifths; discal recurvature of the sutural stria at apex—really the sulcate apical part of an obsolete fifth stria—close to the margin. Length 2.0–2.4 mm.; width 0.8 mm. California (Siskiyou, and to the southward), Nevada (Reno), Arizona and one example labeled Texas (El Paso),—Dunn. . . . . **rapax** Lec.

5—Form narrowly suboval, convex, polished, flavo-testaceous; head less than two-thirds as wide as the prothorax, with very small and distant anterior frontal sulci; eyes moderate but prominent; antennæ three-fifths as long as the elytra, slender, flavate, incrassulate and slightly fuscous distally, the sixth joint fully twice as long as wide; prothorax a third wider than long, widest evidently before the middle; sides anteriorly rounded, becoming very broadly and just visibly sinuate basally, finely but strongly reflexed; base evidently wider than the apex; subbasal sulcus fine, with a row of regular punctures, broken at the middle, where there is a single puncture on the median line; foveæ small, remote from the angles; elytra two-thirds longer than wide, very gradually acutely ogival behind, three-sevenths wider than the prothorax, the foveæ small, near basal and before apical third. Length 2.1–2.35 mm.; width 0.7–0.78 mm. Arizona (Yuma), Utah (southwestern) and Texas (Laredo).

audax Lec.

Form elongate-suboval, convex, polished, flavo-testaceous; head scarcely two-thirds as wide as the prothorax, with obsolete sulci and moderate, rather prominent eyes; antennæ very slender, barely three-fifths as long as the elytra, evenly filiform, the last three joints abruptly somewhat wider; prothorax two-fifths wider than long, widest at two-fifths from apex, the sides moderately rounded, straight basally; base evidently wider than the apex; fine subbasal sulcus with an even series of punctures, rather widely broken medially, with a single moderate puncture on the median line; foveæ small, remote from the angles, the carina of which is very evident though short; elytra three-fifths longer than wide, two-fifths wider than the prothorax, rather obtusely ogival behind, the sides very gradually rounding toward the humeri; foveæ distinct, near basal and slightly before apical third. Length 2.2–2.5 mm.; width 0.75–0.85 mm. Indiana, Wisconsin and Missouri. . . . . **dolosa** Lec.

6—Pronotum with three medio-subbasal punctures, generally rather well defined. 7

Pronotum with a medio-subbasal puncture, the subbasal punctured sulcus being interrupted medially or not; sometimes the inner puncture of the lateral rows of punctures may be slightly more pronounced, giving a vague appearance of three punctures, a division by the presence or absence of three punctures being therefore not always wholly unequivocal.....9

7—Body very deep and uniform polished black, the under surface piceous, the legs rufous. Head three-fifths as wide as the prothorax, without evident sulci, the eyes rather small and very moderately prominent; antennæ fuscous, testaceous basally, three-fifths as long as the elytra, slender basally, gradually feebly incrassate distally; prothorax two-fifths wider than long, the sides rather strongly, subevenly arcuate, extremely briefly subsinuate at the minutely subprominent angles; subbasal punctate sulcus completely interrupted medially, with an isolated medial fovea, the end punctures of the lateral series rather more pronounced than the others, giving the appearance of three medio-basal punctures; carina small and feeble, the foveæ shallow, remote from the carina; elytra oval, one-half longer than wide, a third wider than the prothorax; sutural stria deep, not attaining the base; outside of this a second excessively fine feeble stria is sometimes glimpsible. Length 2.0 mm.; width 0.8 mm. California (Paraiso Springs, Monterey Co.). San Diego—LeConte.....**anthrax** Lec.

Body virtually unicolorous, the elytra without obvious nubilously paler areas. Color very dark rufous, the legs slightly paler; head small, less than three-fifths as wide as the prothorax, with two very small and feeble anterior frontal impressions; eyes moderate in size and prominence; antennæ slender, gradually very slightly incrassate distally, infumate, clearer basally, fully two-thirds as long as the elytra; prothorax large, nearly one-half wider than long, wider at base than apex, widest at about the middle, the sides subevenly and moderately arcuate throughout; three subbasal punctures isolated and distinct; foveæ small, rounded, distant from the angles; carina small but well defined; elytra one-half longer than wide, barely a fourth wider than the prothorax, the coarse deep sutural stria not attaining the base; foveæ at third and three-fifths. Length 1.8–2.3 mm.; width 0.75–0.85 mm. Texas (Galveston). Many specimens.
solita n. sp.

Body castaneous, the elytra with suffused slightly paler coloration externally toward base, also posteriorly and sometimes laterally....8

8—Form suboval, rather stout, very convex and highly polished; head notably small, generally only a little more than half as wide as the prothorax; eyes very moderate in size and convexity; anterior impressions small and feeble; antennæ nearly as in the preceding; prothorax not so large and much more rounded at the sides, two-fifths wider than long, much wider at base than apex, the sides evenly, subcircularly rounded, nearly straight basally, widest slightly before the middle; three subbasal foveæ isolated and distinct; foveæ small, deep, distant from the angles, which are briefly carinate; elytra not quite one-half longer than wide, nearly two-fifths wider

than the prothorax, gradually obtusely ogival in nearly apical half; coarse deep sutural stria almost but not quite attaining the base; foveæ at basal third and just behind the middle. Length 1.9–2.3 mm.; width 0.75–0.9 mm. Texas (Austin, Waco and Houston).

soror n. sp.

Form more oblong-suboval and not quite so convex, pale testaceous throughout, the paler nubilosity of the elytra so faint as to be indistinct; head three-fifths as wide as the prothorax, the eyes moderate; anterior strioles short and feeble; antennæ nearly two-thirds as long as the elytra, feebly and gradually incrassate, slender basally as usual; prothorax nearly one-half wider than long, widest near apical two-fifths; base slightly wider than the apex; sides strongly rounded, straight basally, the angles minutely subprominent; subbasal arcuate punctate sulcus distinct laterally, the three medial punctures isolated and distinct; foveæ small; margins very finely reflexed: elytra one-half longer than wide, two-fifths wider than the prothorax, rapidly obtusely ogival behind, the parallel sides arcuate, very gradually rounding basally, the humeri not exposed at base beyond the thoracic base; coarse sutural stria abbreviated in basal seventh; foveæ small, near basal and apical third. Length 2.0 mm.; width 0.9 mm. New Mexico (Jemez Springs),—Woodgate.

monticola n. sp.

Form broader and more parallel, convex, polished, castaneous, each elytron with two large nubilous areas of paler tint; head larger than in *soror*, though barely more than half as wide as the prothorax, the eyes moderate, rather prominent; short anterior sulci distinct; antennæ three-fifths as long as the elytra, yellow and slender basally, fuscous and very feebly incrassate distally; prothorax large and very convex, nearly one-half wider than long, widest barely before the middle, the sides strongly rounded, moderately reflexed; surface with the three subbasal punctures isolated and distinct; elytra scarcely one-half longer than wide and about a third wider than the prothorax, parallel, feebly arcuate at the sides, obtusely parabolic at apex; deep sutural stria distinctly abbreviated at base; foveæ very small, at about third and three-fifths. Length 2.5 mm.; width 1.0 mm. Mississippi (Vicksburg). [*T. incurvus* Lec. nec Say].

nebulosa Chd.

Form and coloration somewhat as in *nebulosa* but less broad and frequently nearly black, in which case the elytral paler areas are often inconspicuous and still more nubilous; head larger than in *soror*, though scarcely over half as wide as the prothorax, the anterior short sulci minute and fine; eyes well developed and rather prominent; antennæ as in *nebulosa;* prothorax relatively not quite so large as in the latter species, not one-half wider than long, widest rather distinctly before the middle, the sides strongly, evenly rounded, feebly sinuate basally, the angles sharp and subprominent; three subbasal discal punctures strong and clearly isolated; base wider than the apex as usual; elytra one-half longer than wide and fully two-fifths wider than the prothorax, broad, oblong-suboval, gradually ogival in nearly posterior two-fifths; sides parallel, arcu-

ate; deep sutural stria distinctly abbreviated at base, exactly as in *nebulosa*, from which the present species differs in coloration and in the narrower form, as stated, and in its relatively smaller head and prothorax. Length 2.1–2.35 mm.; width 0.8–0.95 mm. Utah (Provo and neighboring regions),—Wickham. Many specimens. **sectator** n. sp.

A—Almost similar to *sectator* but slightly more elongate and larger in size, the prothorax more rapidly narrowed basally, the three subbasal punctures similarly isolated; elytra slightly more elongate, more gradually obtusely acuminate at apex; sutural stria almost as abbreviated at base. Length 2.25–2.4 mm.; width 0.83–0.93 mm. Arizona. Four examples..... **sospes** n. subsp.

9—Ground color piceous or castaneous to rufo-testaceous.....10

Ground color deep black, highly polished as usual.....13

10—Elytra somewhat as in the preceding section, having each two very nubilously indefinite paler areas.....11

Elytra uniform in color, or without two paler areas.....12

11—Body oblong-oval, convex, moderately stout, piceous to castaneous, the elytra marked as in *nebulosa;* head nearly three-fifths as wide as the prothorax, the eyes rather well developed and prominent; anterior impressions very feeble; antennæ fuscous, paler and more slender basally, three-fifths as long as the elytra; prothorax relatively large, one-half wider than long or nearly, widest but little before the middle; base much wider than the apex; sides almost evenly and strongly rounded throughout, straight near the obtuse basal angles; arcuate subbasal sulcus finally punctate; a larger medial puncture is more or less isolated; foveæ shallow and indefinite; carina small; elytra rather more than one-half longer than wide, barely a third wider than the prothorax, parallel, obtusely ogival at apex, the sides very gradually rounded toward the humeri; deep sutural stria moderately abbreviated at base; outside of this coarse sutural stria a second, extremely fine, may sometimes be discovered; foveæ at basal third and behind the middle. Length 1.7–2.3 mm.; width 0.6–0.8 mm. Rhode Island and North Carolina to Minnesota and Arkansas. Very abundant, the series at hand numbering more than sixty specimens. [*T. pulchellus* Lec. nec Laf.; *anceps* Lec.]..... **incurva** Say

Body somewhat as in *incurva* in outline and coloration, but larger and stouter, the prothorax widest less medially; head four-sevenths as wide as the prothorax, the eyes moderate in size and prominence; antennæ similar; prothorax large, not quite one-half wider than long, widest at anterior two-fifths; sides well rounded anteriorly, nearly straight and oblique in about basal half; finely punctate subbasal sulcus entire, the large medial puncture slightly isolated foveæ at the outer ends of the sulcus as usual, small but rather deep; elytra oblong, parallel, obtusely ogival behind, more than one-half longer than wide, scarcely a third wider than the prothorax; striæ as in *incurva*, except that the sutural stria more nearly attains the base, sometimes entirely so; foveæ at two and four sevenths. Length 2.3

–2.4 mm.; width 0.85–1.0 mm. Two examples, unlabeled in the Levette collection and probably from Indiana.....**vernicata** n. sp.

Body shorter and much stouter than in *incurva*, paler in color as a rule, the ground tint castaneous, the paler elytral areas similarly distinct; head four-sevenths as wide as the prothorax, the eyes only moderate in size but notably prominent; anterior frontal impressions somewhat longer than usual; antennæ almost as in *incurva* but longer, paler and more slender, fully two-thirds as long as the elytra; prothorax remarkably large, two-fifths wider than long, the base much wider than the apex as usual, widest near anterior two-fifths; sides anteriorly rather broadly, not very strongly rounded, moderately oblique and nearly straight in almost basal half; subbasal sulcus moderate, the medial puncture strong, isolated, from it extends to about apical fourth the very fine medial stria; foveæ small and rather deep; elytra barely one-half longer than wide, sometimes less, about a fourth wider than the prothorax, obtusely parabolic at apex; coarse sutural stria not quite, though nearly, attaining the base; outside of it a feeble abbreviated stria is generally observable under oblique illumination; foveæ very small, at two and four sevenths. Length 1.9–2.2 mm.; width 0.7–0.9 mm. Texas (Austin, Waco and Houston) and Mississippi (Vicksburg).....**congener** n. sp.

12—Form rather narrow, elongate-suboval, strongly convex, highly polished, uniform pale testaceous-brown throughout, the legs more flavate; head rather more than three-fifths as wide as the prothorax, the eyes moderate but prominent; anterior strioles very minute; antennæ fusco-testaceous, a little clearer basally, three-fifths as long as the elytra; prothorax large, one-half wider than long, widest at about the middle, the sides strongly and subevenly arcuate, nearly straight basally, the angles sharp, scarcely prominent and more than right; subbasal impressed line completely impunctate, the medial puncture evident, subisolated; foveæ small, distinct, distant from the angles as usual; elytra fully one-half longer than wide, scarcely a third wider than the prothorax, parallel, evenly parabolic in about apical third; deep sutural stria abbreviated in basal sixth or seventh; outside the sutural stria a second extremely fine line is sometimes glimpsible; foveæ behind basal and before apical third. Length 1.9–2.2 mm.; width 0.75–0.83 mm. New Jersey and Virginia (Norfolk). [*Tachys fuscicornis* Hayw. nec Chd.].....**gemella** Csy.

Form parallel or oblong-suboval, very small in size, convex, highly polished and sculptureless, pale yellowish-brown throughout, the legs and under surface still paler; head feebly infumate, notably small, barely over half as wide as the prothorax, the anterior strioles short but distinct; eyes very moderate in size and convexity; antennæ scarcely two-thirds as long as the elytra, blackish and incrassate distally, more slender and flavescent basally; prothorax relatively larger than usual, three-fifths wider than long, wider at base than at apex, the sides broadly and feebly arcuate throughout, slightly straighter posteriorly, the angles obtuse but not rounded; subbasal sulcus interrupted medially, with a single strong puncture in the interval; elytra oblong-oval, very gradually rounded behind, the

sides gradually and broadly rounding to the thoracic base, one-half longer than wide and barely over a fifth wider than the prothorax; sutural stria rather deep, distinctly abbreviated at base; a second very fine stria is also barely glimpsible; foveæ at basal third and at three-fifths, not widely separated. Length 1.7 mm.; width 0.68 mm. Rhode Island (Boston Neck)..... **parallela** n. sp.

Form more abbreviated and stouter, still smaller, polished, blackish-castaneous, the elytra either uniformly more testaceous or gradually rufulate toward base; head fully three-fifths as wide as the prothorax, the anterior strioles evident; eyes very moderate in size but rather prominent; antennæ fusco-testaceous, clearer basally, relatively longer than usual, three-fourths as long as the elytra; prothorax two-fifths wider than long, widest at about the middle, the sides subevenly arcuate, rather straighter and more converging basally; base but slightly wider than the apex; subbasal sulcus with a regular series of fine punctures, the medial larger puncture distinct; foveæ small, rather deep, formed as usual; elytra scarcely one-half longer than wide, two-fifths wider than the prothorax, oval, the deep sutural stria abbreviated in basal eighth; no fine stria is glimpsible outside the sutural; foveæ near basal third and four-sevenths. Length 1.65–2.0 mm.; width 0.62–0.75 mm. Rhode Island to Kansas. Rather abundant. [*Baryt. glossema* Csy.]..... **granaria** Dej.

Form very short, stout, suboval, polished, strongly convex and very uniform pale brownish-testaceous in color throughout; head more than three-fifths as wide as the prothorax, the anterior strioles distinct, oblique; eyes well developed and moderately prominent; antennæ shorter than in *granaria*, flavate, more incrassate and dusky distally, three-fifths as long as the elytra; prothorax nearly one-half wider than long, the base subequal to the apex, widest at about the middle, the sides strongly, subevenly arcuate, notably oblique basally, the angles minutely prominent though more than right; subbasal sulcus fine, very feebly subcrenulate, as though suggesting punctures, but these are not definite; medial puncture distinct; foveæ small, rather deep, not so distant from the angles as usual; elytra shorter than in any other species, barely two-fifths longer than wide, almost evenly oblong-oval, the deep sutural stria obsolete in basal seventh; the second extremely fine line is very faintly glimpsible and as nearly as possible obsolete; foveæ nearly as in the preceding species. Length 1.6 mm.; width 0.75 mm. Virginia (Fortress Monroe)..... **brevis** n. sp.

13—Body stout, very convex and polished, deep black, each elytron with an external subbasal and lateral posterior pale spot, rather sharply defined and conspicuous; legs and antennæ clear testaceous throughout, the latter slender, barely visibly incrassulate distally and about two-thirds as long as the elytra; head but little more than half as wide as the prothorax, the anterior strioles sharply defined; eyes unusually small, moderately convex, the two superciliary punctures equally distant from the eye; prothorax large, nearly one-half wider than long, parallel, the sides subevenly and moderately rounded throughout; base distinctly wider than the apex; subbasal sulcus

with an even row of small punctures, interrupted at the middle, where the single larger puncture is distinct; foveæ small, distant from the angles; elytra less than one-half longer than wide, only a little more than a fourth wider than the prothorax, evenly ogival in posterior two-fifths, deep sutural stria obsolete in basal eighth, the second very fine line sometimes visible; foveæ near two-fifths and just behind the middle. Length 1.8–2.1 mm.; width 0.7–0.85 mm. Missouri (St. Louis), North Carolina (Asheville), New York and Rhode Island. An attached note by Jülich says that the species was found in large numbers with ants in February. . . **lætifica** n. sp.

Body rather narrow, elongate-suboval, convex, shining, deep black, each elytron with the humerus very indefinitely and feebly pallid and with a subexternal area near apical third, which is feebly and very indefinitely pale; legs rufous; head barely more than half as wide as the prothorax, the anterior strioles distinct; eyes moderate in size, peculiar in being almost flat; antennæ short, infuscate distally, but little more than half as long as the elytra; prothorax nearly one-half wider than long, widest at anterior two-fifths, the sides there moderately rounded, oblique and nearly straight in fully basal half; subbasal sulcus with a regular line of very close-set small punctures, the larger medial puncture distinct; foveæ rather larger and deeper than usual, remote from the angles; elytra more than one-half longer than wide, gradually acutely ogival in fully apical two-fifths, only about a fourth wider than the prothorax; deep sutural stria attaining the base or virtually so, the second line rather distinct in most examples; foveæ at two and four sevenths. Length 1.85–2.1 mm.; width 0.65–0.75 mm. Nevada (Reno) and California (Humboldt Co.). Many specimens. . . . . **renoica** n. sp.

Body narrowly oval, convex, polished, deep black, the elytra without paler areas; under surface and legs obscure rufous; head relatively larger, three-fifths as wide as the prothorax, the anterior strioles distinct, oblique; eyes moderate and slightly convex but not prominent; antennæ fuscous, thick, slender and pale basally, three-fifths as long as the elytra; prothorax scarcely two-fifths wider than long, parallel, widest at the middle, the sides very evenly and moderately arcuate from apex to base, the latter wider than the apex, which is truncate, with the obtuse angles unusually pronounced; subbasal sulcus with small close-set punctures, the series rather widely interrupted medially, the medial puncture large and strong; foveæ moderate, deep, the carina at the angles short but unusually distinct; elytra one-half longer than wide, fully two-fifths wider than the prothorax, very evenly oval, arcuately rounding in nearly apical half; deep sutural stria slightly abbreviated at base; there is no distinct second line; foveæ small, near basal and apical third. Length 1.9 mm.; width 0.75 mm. California (Lake Tahoe). One specimen. **tahoensis** n. sp.

14—Body pale flavo-testaceous throughout and elongate, the habitus much as in *dolosa*. Polished, rather convex; head fully three-fifths as wide as the prothorax, the anterior strioles feeble, oblique; eyes rather large and convex; antennæ two-thirds as long as the elytra,

infumate and moderately dilated distally, thinner and yellow basally; prothorax relatively very moderate in size, two-fifths wider than long, widest at two-fifths from the apex, the sides rounded, oblique and nearly straight in about basal half; base distinctly wider than the apex; subbasal sulcus unusually arcuate, feebly subcrenate but not clearly punctate, rather widely interrupted at the middle, the medial puncture strong; foveæ small, rather deep, not far from the small but evident carina; elytra elongate, three-fifths longer than wide, nearly three and one-half times as long as the prothorax and almost one-half wider, parallel, with broadly arcuate sides, rather obtusely parabolic in about apical third; humeri unusually rapidly rounded; deep sutural stria abbreviated at base, the second distinct but not so strong and greatly biabbreviated, both with feeble crenulation but without distinct punctures of any kind; foveæ rather widely impressed, near basal and apical third. Length 2.1 mm.; width 0.8 mm. Arizona (Riverside),—Wickham. Three similar examples. . . . . **apacheana** n. sp.

Body darker in tint, most often deep black, sometimes with a feeble posterior reddish cloud on each elytron 15

15—Body elongate in form. Pacific coast regions 16

Body short and much more ventricose as a rule. Atlantic regions. . . . 17

16—Form subparallel, with rather small anterior parts, dark red-brown in color, the elytra black throughout; under surface piceous, the legs rufous; head almost two-thirds as wide as the prothorax, with well developed and rather prominent eyes; antennæ fusco-testaceous, clearer basally, slender, three-fifths as long as the elytra; prothorax two-fifths wider than long, widest slightly before the middle, the sides strongly rounded, oblique behind, becoming feebly sinuate near the sharp and subprominent angles; base wider than the apex, subbasal sulcus with a regular row of small punctures, interrupted medially, where there is a strong median puncture; the ends of the punctured series are rather deeper, producing the appearance of three punctures in some cases; foveæ small; carina short and oblique; elytra three-fifths longer than wide, about one-half wider than the prothorax, the sutural stria much abbreviated basally, the second distinct; foveæ rather large, before basal third and near three-fifths. Length 1.8–2.4 mm.; width 0.75–0.9 mm. California (Sta. Cruz to Sonoma). . . . . **sedula** n. sp.

Form nearly similar but much broader, the coloration similar; head three-fifths as wide as the prothorax, the eyes not quite so large, convex; antennæ similar, moderately and very gradually incrassate distally; prothorax more transverse, one-half wider than long, otherwise as in *sedula*, the deep subbasal sulcus closely punctate, widely and abruptly interrupted medially, the median puncture strong; elytra broader, about one-half longer than wide, evidently less than one-half wider than the prothorax, similarly rather rapidly subobtusely rounded behind; striation similar, except that the sutural stria comes nearer to attaining the base and, that outside the second stria, an excessively fine third line is sometimes glimpsible and externally tan-

gent to the well developed foveæ, situated as in *sedula*. Length 2.35–2.6 mm.; width 0.95–1.1 mm. Nevada (Reno)..**profuga** n. sp.

17—Pronotum with three distinct medio-subbasal punctures.....18

Pronotum without three subbasal punctures.....19

18—Body very small, convex, not very stout, polished, black, piceous when immature, the elytra generally indefinitely rufescent posteriorly; legs and under surface rufous; head three-fifths as wide as the prothorax, the anterior strioles distinct; eyes well developed, convex; antennæ piceous, pale basally, feebly incrassate distally, two-thirds as long as the elytra; prothorax nearly one-half wider than long, widest but little before the middle, the sides strongly rounded, oblique and straighter basally, the angles minutely subprominent: subbasal sulcus wholly impunctate, fine, interrupted medially, where three punctures are usually distinct; foveæ small, distant from the angles; elytra two-fifths longer than wide and about two-fifths wider than the prothorax, rapidly ogival in about posterior third; sutural stria virtually attaining the base, the second stria abbreviated but almost as distinct as the sutural; outside of this a third very fine stria can sometimes be glimpsed; foveæ near two and four sevenths. Length 1.65–2.0 mm.; width 0.7–0.8 mm. Rhode Island (Boston Neck), Virginia (Norfolk) and North Carolina (Asheville). Abundant. [*Tachys mendax* Lec.].....**xanthopus** Dej.

A—Similar to *xanthopus* but stouter, the head and prothorax similar, black, the latter relatively smaller in size; elytra broader, a third longer than wide, almost one-half wider than the prothorax, uniform piceous-brown in color, the striation similar, except that the second stria is shorter; under surface and legs rufous. Length 2.1 mm.; width 0.88 mm. Rhode Island (Boston Neck). One example.....**laxipennis** n. subsp.

B—Form much narrower and more parallel than in *xanthopus*, black, the elytra uniformly piceous-brown; under surface piceous, the legs subflavate; head and prothorax nearly as in *xanthopus*, the elytra much narrower and more parallel, rather more than one-half longer than wide, two-fifths wider than the prothorax; sides parallel and feebly arcuate, the striation as in *xanthopus*. Length 1.6 mm.; width 0.6 mm. Rhode Island (Boston Neck). One specimen.....**famelica** n. subsp.

Body larger and more elongate, with relatively larger prothorax than in *xanthopus*, deep polished black throughout, the under surface and legs rufous, the elytra not rufous posteriorly; head as in *xanthopus;* antennæ differing in being fuscous, with only the first or first two joints flavate; prothorax only two-fifths wider than long, otherwise as in the preceding, except that the sinus of the sides at the prominent basal angles is more pronounced, and the three punctures are still more conspicuous and rather more close-set; elytra much longer, fully one-half longer than wide, only a third wider than the prothorax, more gradually obtusely ogival behind; sutural stria deep and fully and completely attaining the base, the second stria shorter than in *xanthopus* and scarcely so marked; foveæ similar. Length 2.0–2.25 mm.; width 0.78–1.0 mm. Rhode Island (Boston Neck),

New York (Long Island), New Jersey and Virginia (Fortress Monroe). Abundant. [*Tachys xanthopus* Lec. nec Dej.]. . **levipes** n. sp.

Body stout, very convex, ventricose, black, polished, each elytron with a large discal rufous spot near apical fourth; under surface piceous, the hind body rufous, the legs flavo-rufous; head well developed, much larger than in *levipes*, with rather large and prominent eyes, two-thirds as wide as the prothorax, the anterior strioles distinct, parallel; antennæ slender, but very feebly incrassate, fuscous, paler at base, nearly three-fourths as long as the elytra; prothorax as in *levipes*, but slightly shorter and more transverse and differing in having the fine subbasal sulcus only visible toward the foveæ and finely punctate, the wide vacant median space with three strong isolated punctures, of which the median is much the largest; elytra very nearly one-half longer than wide, three-sevenths wider than the prothorax, gradually parabolic in about apical two-fifths, broader and with more arcuate sides than in *levipes;* sutural stria virtually attaining the base, the second feebler and much abbreviated; outside of this there are feeble impressed traces of two or three other striæ as a rule; foveæ strong, at two and four sevenths, adjoining the third faint line, these lines not sufficiently distinct to associate the species with *vivax* and allied species. Length 1.9–2.3 mm.; width 0.72–0.9 mm. Texas (Galveston and Austin), Louisiana (Alexandria), Mississippi (Vicksburg), Indiana and Iowa (Keokuk). Abundant. . . . . **rubricauda** n. sp.

19—Form oblong, strongly convex, deep polished black, the elytra feebly picescent; under surface black, the legs obscure testaceous; head three-fifths as wide as the prothorax, with relatively large and prominent eyes, the anterior strioles small but deep; antennæ slender, feebly incrassulate, three-fourths as long as the elytra, fuscous, the first three or four joints flavo-testaceous; prothorax large, fully two-fifths wider than long, widest just before the middle, the sides broadly and strongly rounded, straight and oblique posteriorly; subbasal sulcus impunctate, entire, the space between it and the basal margin convex and bead-like; elytra barely two-fifths longer than wide and about a third wider than the prothorax, parallel, with but slightly arcuate sides and rapidly rounded humeri, arcuately ogival in about apical third; sutural stria very slightly abbreviated at base, the second rather finer, shorter and feebler than usual in this subsection; foveæ at two and four sevenths. Length 1.75 mm.; width 0.8 mm. North Carolina (Southern Pines),—Manee. Six examples. Size rather uniform. . . . . **ancilla** n. sp.

Form nearly as in the preceding, but less stout, the prothorax not quite so large, piceous-black, polished, the under surface rufous, the legs more flavate; head larger and nearly two-thirds as wide as the prothorax, with still larger and prominent eyes, the strioles and antennæ somewhat as in *ancilla;* prothorax nearly one-half wider than long, in form and structure as in the preceding; base similarly distinctly wider than the apex; subbasal sulcus impunctate, rather shallower than in *ancilla* and, at the middle, having a single very faint subpunctiform impression; elytra as in *ancilla* but shorter, ogivally

rounded in apical two-fifths, two-fifths wider than the prothorax; sutural stria more nearly attaining the base, the second longer and stronger; foveæ at basal third and just visibly behind the middle. Length 1.8 mm.; width 0.7 mm. Florida (Lake Worth),—Kinzel. **fatua** n. sp.

20—Color black; body shorter and stouter, the elytra more or less evidently rufous near the apex, the striæ never punctulate.....21

Color castaneous or castaneo-testaceous; body more elongate; striæ sometimes punctulate.....22

21—Body stout, suboval, strongly convex and highly polished, rather large in size; elytra generally with the lateral more pallid area near the apex small, extremely feeble and sometimes undiscoverable; under surface and legs rufo-ferruginous; head three-fifths as wide as the prothorax, the strioles rather long and deep; eyes moderate but prominent; antennæ piceous, flavate basally, two-thirds as long as the elytra; prothorax large, very convex, two-fifths wider than long, much wider at base than at apex, widest slightly before the middle; sides broadly, strongly rounded, becoming distinctly sinuate before the basal angles, which are right, sharp and carinulate; subbasal sulcus fine, slightly punctulate laterally, broadly interrupted, with three strong and conspicuous isolated punctures medially; elytra not quite one-half longer than wide, two-fifths wider than the prothorax, arcuately ogival in posterior two-fifths; sides parallel, rather gradually rounding at the humeri; sutural stria not quite attaining the base, the second and third strong, abbreviated, a fourth and fifth stria also just glimpsible; foveæ attached to the inner side of the third stria at two and four sevenths. Length 2.5–2.9 mm.; width 0.9–1.2 mm. Missouri (St. Louis). Six examples. District of Columbia—LeConte.....**capax** Lec.

Body stout, strongly convex and polished, black or feebly picescent; elytra each with a large nubilous red lateral area near the apex; under surface piceous-black, the abdominal tip black, the legs dark rufous; head three-fifths as wide as the prothorax, the strioles moderate, parallel; eyes very moderate in size and prominence; antennæ piceous, paler basally, two-thirds as long as the elytra; prothorax two-fifths wider than long, wider at base than at apex, widest at two-fifths from apex, the sides very moderately rounded, becoming slightly sinuate only at the sharp and subprominent basal angles; subbasal three punctures coarse, deep and clearly isolated, the fine oblique sulcus, from each lateral puncture to the moderate fovea, with fine and feeble punctuation; carina short but strong, at a slight distance inside of each angle; elytra one-half longer than wide, not quite one-half wider than the prothorax, arcuately ogival in posterior two-fifths, the sides rapidly rounding at the humeri; sutural stria virtually attaining the base, the second and third abbreviated but rather strong, the fourth and fifth distinctly visible at certain angles of reflection; foveæ at basal third and three-fifths. Length 2.0–2.4 mm.; width 0.75–0.88 mm. North Carolina (Asheville) and Pennsylvania (near Philadelphia). Six examples.....**saturata** n. sp.

Body smaller, stout, convex, polished, piceous-black or slightly paler;

elytra each with a large nubilous oval external area, near the apex, of a pale flavo-rufous tint; under surface rufous, the legs more flavate; head three-fifths as wide as the prothorax, the strioles distinct, the eyes moderate, prominent; antennæ piceous, paler basally, two-thirds as long as the elytra; prothorax nearly one-half wider than long, widest but slightly before the middle; base very much wider than the apex; sides strongly rounded, briefly sinuate at the sharp and rather prominent angles, the carina very short, not distinct; margins distinctly reflexed; three subbasal punctures large, deep, isolated and conspicuous; foveæ very small; elytra barely one-half longer than wide, two-fifths wider than the prothorax, gradually obtusely ogival in apical two-fifths; sutural stria fully attaining the base, the abbreviated second and third almost equally impressed, the fourth and fifth traceable; foveæ near two and four sevenths. Length 1.6–2.0 mm.; width 0.75–0.9 mm. Valley of the Rio Grande from Brownsville to El Paso. . . . . **gaudens** n. sp.

Body still smaller and much narrower, similar in coloration and in the very polished lustre; head similar, actually though not relatively smaller, the antennæ evidently shorter and fusco-testaceous in color, three-fifths as long as the elytra; prothorax similar but somewhat shorter, the three isolated subbasal punctures not so large or deep; elytra relatively longer, fully one-half longer than wide, gradually parabolic in outline from slightly behind the middle, a third wider than the prothorax; striation as in *gaudens*. Length 1.6–1.65 mm.; width 0.68 mm. Texas (Waco and Austin). . . . . **fracta** n. sp.

22—Form much more elongate than in the preceding subsection and rather less strongly convex, polished, piceo-rufous; under surface rufous, the legs more flavate; head nearly two-thirds as wide as the prothorax, the anterior strioles faint; eyes moderate in size and prominence; antennæ rather long and compressed, fusco-testaceous, two-thirds as long as the elytra; prothorax two-fifths wider than long, widest at two-fifths from the apex, the latter evidently, though not greatly, narrower than the base; sides moderately rounded anteriorly, feebly oblique in about basal half, very slightly sinuate near the angles, which are right and sharp; margins moderately reflexed; three isolated subbasal punctures distinct, but relatively smaller than in the preceding subsection; foveæ moderate, the carina distinct but obtuse; elytra slightly more than one-half longer than wide and almost one-half wider than the prothorax, parallel, obtusely parabolic at tip, perfectly uniform in coloration; sutural stria not quite attaining the base, the second and third distinct, the fourth and fifth traceable, all the striæ faintly and irregularly subpunctulate; foveæ adhering to the third stria as usual and at two and four sevenths. Length 2.35–2.6 mm.; width 1.0–1.05 mm. Pennsylvania and Indiana. Not very abundant. . . . . **tripunctata** Say

Form less elongate, more oval, more convex, the sides of the prothorax more evenly rounded; each elytron with a nubilous paler area externally behind; color rufo-castaneous; under surface and legs rufous; head but little more than half as wide as the prothorax, the eyes moderate; antennæ fusco-testaceous, two-thirds as long as the ely-

tra; prothorax much larger than in *tripunctata* and more distinctly wider at base than at apex, widest less anteriorly, the sides broadly rounded, straighter basally, the angles minutely subprominent, with rather distinct carina; three subbasal punctures strong and isolated, the fine sulcus—connecting the lateral of the punctures with the moderate foveæ—not punctate; elytra one-half longer than wide, fully a third wider than the prothorax, rather gradually narrowly ogival in posterior two-fifths; striæ not evidently punctulate, there being but feeble traces visible under high amplification; sutural stria attaining the base, the four others abbreviated, distinct, gradually diminishing; foveæ near two and four sevenths. Length 2.2–2.5 mm.; width 0.78–0.9 mm. Pennsylvania and North Carolina (Asheville) to Iowa (Keokuk).....**vivax** Lec.

Form more oblong-oval, rather less convex, polished, rufous in color, the elytra behind nubilously more flavate externally; head relatively larger and with larger, more prominent eyes, nearly two-thirds as wide as the prothorax; antennæ flavo-testaceous, about two-thirds as long as the elytra; prothorax much smaller than in *vivax*, about as in *tripunctata* in that respect, but with the sides more broadly rounded, almost exactly as in *vivax;* base much wider than the apex, the angles rather more than right but sharp, the carina small; three subbasal punctures and lateral oblique sulci as in *vivax;* elytra almost three-fifths longer than wide, fully two-fifths wider than the prothorax, gradually ogival in about apical two-fifths; striæ only slightly irregular but not punctulate, the sutural slightly abbreviated at base, the second and third distinct, but not so deep as in *tripunctata* or *vivax*, the others feebly glimpsible; foveæ at basal and before apical third. Length 2.5 mm.; width 0.9 mm. Texas (Laredo). One example.....**laredoana** n. sp.

Form elongate-suboval, only moderately convex, uniformly dark red-brown throughout; head two-thirds as wide as the prothorax, with minute anterior strioles and very moderate eyes; antennæ fusco-testaceous, rather more than two-thirds as long as the elytra; prothorax relatively small, fully two-fifths wider than long and widest near two-fifths from the apex, the sides broadly rounded, feebly converging and straight basally, the angles minutely subprominent, with the carina short; base slightly wider than the apex; middle subbasal puncture distinct, isolated, the lateral—forming the ends of the punctured sulcus thence to the foveæ—not very strongly developed; foveæ almost completely obsolete; elytra oblong-oval, with arcuate sides, fully one-half longer than wide and about one-half wider than the prothorax, rather rapidly ogival behind; striæ smooth, the sutural abbreviated at base, the second much abbreviated behind but almost as deep, the third short but distinct, those beyond faintly glimpsible; foveæ at basal and before apical third. Length 2.3 mm.; width 0.88 mm. New York (Bluff Point, Lake Champlain). One example.....**serva** n. sp.

The species described above as *mellita* is of notably distinct habitus, but I fail to find any reference to it in the works of Mr. Bates.

The difference between the tripunctate and unipunctate condition near the thoracic base, is not always clear, but fortunately it serves unequivocally in separating species of the *incurva* and *nebulosa* subsections, which otherwise would be difficult to treat, because of the many species and lack of striking structural modification.

The species described by the writer many years ago under the name *Barytachys gemellus*, was united with *fuscicornis* Chd., by Mr. Hayward, but improperly I think; *fuscicornis*, from Louisiana, seems to be very much larger, being, according to Chaudoir, 2.5 mm. in length.

The two forms *laxipennis* and *famelica* are represented only by single specimens, having the general structural characters of *xanthopus* and found in the same locality; although differing markedly on cursory comparison, it would therefore be injudicious to assign more than subordinate value to them for the present. *Xanthopus* is a very small species, the length given by Dejean being 1.5 mm. That author, however, was very apt to underestimate the length, as LeConte was to overestimate, depending entirely upon methods of measurement, the former author evidently holding the insect below the scale and the latter above. There can be but little doubt that the name *mendax* was applied by LeConte to the form named *xanthopus* by Dejean, and that the *xanthopus* of LeConte is the larger, wholly deep black species named *levipes* in the above table.

The three species *rubricauda*, *gaudens* and *fracta* are undoubtedly closely interrelated. The first is the largest and rather the stoutest and has only two of the elytral striæ distinct, though one or two others are feebly traceable by careful search. *Gaudens* has five striæ visible, the first three conspicuous; it is a little smaller and rather less stout than *rubricauda*, and has a much greater development of the bright rufous subapical coloring of the elytra; it seems, also, to be peculiar to the Rio Grande Valley. *Fracta* is the smallest and narrowest and is one of the more diminutive forms of the genus; it inhabits the interior regions of Texas, more especially to the westward of the extended Mississippi Valley regions occupied by *rubricauda*. These were all confounded with *xanthopus* by Mr. Hayward, who at the same time called attention to the diversi-

fication in elytral striation, erroneously assuming, however, that this was due to simple variability; the large series at hand show that this is not by any means probable. *Liebecki* Hayw., evidently belongs also to this extensive *xanthopus* section, but appears to be larger, stouter and with more transverse prothorax than any known to me; it is said by Mr. Hayward to be 2–2.5 mm. in length and occurs in Texas; the elytra are said to be gradually pallescent posteriorly.

Tachys Steph.

Polyderis Mots. (pars.)

This remarkably isolated genus may always be distinguished at a glance from any species of *Tachyura* by the subdepressed form of the body, thinner integument and usually less polished surface, the elytra being frequently opalescent because of the minute sculpture. In fact the entire habitus of the two genera is so different that it seems strange they should have ever been closely associated; this was thoroughly recognized by those usually careful observers Motschulsky and Chaudoir, but I do not quite understand why the latter author in describing *Barytachys* should have failed to recognize its identity with *Tachyura* Mots.; this applies also to Mr. Bates in his treatment of *Tachys* in the "Biologia."

Tachys differs from *Tachyura*, not only in the characters stated above, but in possessing on the surface of the mentum two deep, circular and very abruptly defined foramina, similar to those of *Pericompsus* but smaller in size and wanting in all other genera of the *Tachys* group excepting *Paratachys*. It differs also in the very shallow sutural stria, but resembles it in having but few striæ and in the broad interruption of the eighth stria; the latter, besides being even more widely interrupted than in *Tachyura*, is more irregular and frequently in part altogether obsolete, leaving merely a row of setigerous foveæ. The maxillary palpi are slender as a rule, the second joint of the labial stout, the last segment of the outer maxillary lobe very slender and the mentum tooth small and sharply triangular. Our numerous species are assignable to the three following subgeneric groups:

Front broadly bisulcate; eyes well developed; antennæ long; recurved apical part of the sutural stria long.....2

Front without sulci, though having two small anterior strioles; eyes small or very moderate; antennæ short and moniliform; recurvature of the sutural stria very short.....3

2—Dorsal foveæ of the elytra near the fourth stria, the posterior fovea within the hamate tip of the recurvature of the sutural stria. I (*proximus*)

Dorsal foveæ on or inwardly attached to the third stria, the posterior fovea nearly as in the preceding, the frontal sulci less approximate. II (*vittiger*)

3—Body very small; palpi shorter than in the two preceding groups, the mentum tooth but feebly developed.....III (*lævus*)

These groups were correctly separated and defined by Mr. Hayward, but were, I think, given rather too little taxonomic weight. It is impossible to correlate our species with those of Europe, because of lack of material, but it seems probable that the *lævus* type, at least, does not occur there.

Group I—*proximus*

Subgenus **Tachys** in sp.

The species are numerous in this group and occur over the entire country, from the Atlantic to the Pacific, although represented in my cabinet by only a single species, *edax*, in the true Pacific coast fauna. As a rather remarkable character, it should be stated that the second antennal joint is, perhaps always, very materially longer than the third. Mr. Hayward utilizes the structure of the anterior male tarsus in segregating the species of this difficult group. I have tried, in the following table, to employ more general characters, not involving the sex of the individual, but probably without the success that could be wished; the species at present forming part of my collection may be separated as follows:

Prothorax with the sides oblique and broadly sinuate in rather more than basal half; antennæ thicker, the medial joints never more than twice as long as wide; species allied closely to the European *bistriatus* Duft.....2

Prothorax with the sides oblique more posteriorly, sinuate only near the hind angles.....3

2—Form narrowly oblong, subparallel, feebly convex, alutaceous, umber-brown, the prothorax a little clearer rufous; legs slender, testaceous; integuments feebly micro-reticulate, the elytra with very minute strigilation; surface moderately shining; head three-fourths as wide as the prothorax, the sulci only visible anteriorly, obtuse and shallow; eyes moderately large, only feebly convex, extremely minutely

setulose; antennæ piceous, moderately slender, four-fifths as long as the elytra, the medial joints not quite twice as long as wide, the third shorter than the second and obconic; prothorax two-fifths wider than long, widest near apical third; base much narrower than the apex; sides anteriorly strongly rounded, very finely reflexed, oblique and broadly sinuate thence to the obtuse and rounded, strongly reflexed basal angles; transversely angulate entire subbasal furrow shallow and impunctate; stria broadly impressed between this and the very feeble anterior impression; elytra almost three-fifths longer than wide, not quite one-half wider than the prothorax, parallel, circularly rounded at tip, each with three rather distinct striæ; foveæ at basal third and apical fifth or sixth. Length 1.5–1.8 mm.; width 0.55–0.75 mm. California (coast regions north of San Francisco and at Truckee) and Nevada (Reno and Elko).

edax Lec.

Form oblong, slightly broader and larger, feebly convex, the coloration similar; head two-thirds as wide as the prothorax, the eyes moderate and rather convex; sulci shallow and anterior; antennæ piceous, paler basally, rather thick, three-fourths as long as the elytra, the medial joints barely twice as long as wide; prothorax nearly one-half wider than long, widest near apical third; base as wide as the apex; sides rounded anteriorly, oblique and broadly, feebly sinuate behind the middle, finely reflexed, broadly and more strongly at the obtuse and slightly blunt hind angles; transverse subbasal furrow deep but not punctate; median stria very fine; elytra oblong, nearly one-half longer than wide, two-fifths wider than the prothorax, parallel, with arcuate sides, very abruptly rounded at the distinct humeri; sutural stria rather deep and the second feeble, the third barely traceable; foveæ as in the preceding. Length 1.75–2.1 mm.; width 0.7–0.8 mm. Texas (Galveston) and Arkansas..... **umbripennis** Chd.

3—Antennæ rather shorter and stouter, somewhat as in the preceding, never as long as the elytra, the medial joints never distinctly more than twice as long as wide and frequently less.....4

Antennæ longer and more slender, the medial joints generally about three times as long as wide.....6

4—Color rufo-testaceous, the head dusky. Form rather short and stout, moderately convex, subalutaceous; legs more flavate; head large, with very prominent eyes, more than three-fourths as wide as the prothorax, the sulci rather deep, parallel; antennæ flavate, four-fifths as long as the elytra, the second joint fully one-half longer than the obconic third, the medial joints slightly more than twice as long as wide, the tenth correspondingly less; prothorax fully four-fifths wider than long, widest near apical third; base as wide as the apex; sides anteriorly strongly rounded, oblique and barely perceptibly sinuate posteriorly, the angles moderately reflexed, very obtuse but with the apex minutely subprominent; subbasal angulate sulcus rather deep; elytra short, only a third longer than wide, less than one-half wider than the prothorax, rapidly very obtusely rounded behind, the humeri obtuse but distinct; pedicel not two-

fifths the basal width; first and second striæ rather strong, subequal, the third and fourth feebly glimpsible; foveæ before three and at six sevenths. Length 2.0 mm.; width 0.8 mm. Isthmus of Panama (Colon),—Beaumont. . . . . *panamensis n. sp.

Color as in the preceding. Form narrower and more parallel, feebly convex, rather strongly shining; head large, more than three-fourths as wide as the prothorax; eyes moderate but very prominent; sulci distinct, converging; antennæ fusco-testaceous, paler at base, nearly four-fifths as long as the elytra, the second joint a fourth longer than the third, the medial joints just twice as long as wide; prothorax short, fully four-fifths wider than long, widest near apical third; base and apex equal; sides broadly rounded, straight basally, the apices of the very obtuse angles minutely prominent; subbasal sulcus moderate in depth, broadly arcuate; elytra one-half longer than wide, two-fifths wider than the prothorax, circularly rounded behind, the parallel sides broadly and feebly arcuate, the humeri rather abruptly rounded; pedicel a little less than half the basal width; surface sometimes feebly infumate posteriorly; first two striæ subequal, distinct but not deep, the third feeble, the fourth barely glimpsible; anterior fovea at two-fifths. Length 1.8–2.3 mm.; width 0.68–0.85 mm. Arizona. . . . . **vorax** Lec.

Color rufous, the head scarcely at all darker; elytra with a posterior subiridescent blackish cloud. Under surface rufous, the legs flavate; head fully three-fourths as wide as the prothorax, the eyes large, moderately prominent; sulci moderate, rather convergent; antennæ fuscous, paler at base, three-fourths as long as the elytra, the medial joints just twice as long as wide, the second very much longer than the third; prothorax one-half wider than long, the sides anteriorly broadly rounded, oblique and straight posteriorly, the angles obtuse, broadly reflexed, not prominent but not distinctly blunt, well defined; subbasal sulcus deep, arcuate; elytra one-half longer than wide, not quite one-half wider than the prothorax, parallel, with feebly arcuate sides, circularly rounded at apex; first two striæ distinct, three to five barely glimpsible; foveæ as in the preceding. Length 2.0 mm.; width 0.73 mm. Florida (Lake Worth),—Kinzel. **pumilus** Dej.

Color uniform dark brownish-rufous throughout; under surface piceous, the legs more flavate. Surface shining, moderately convex; head over two-thirds as wide as the prothorax, the eyes moderate in size and prominence; sulci slightly converging; antennæ fuscous, paler at base, four-fifths as long as the elytra, the medial joints fully twice as long as wide, the second slightly though evidently longer and thicker than the third; prothorax two-fifths wider than long, widest at apical third; base fully as wide as the apex, if not somewhat wider; sides moderately rounded anteriorly, oblique in basal half, gradually slightly though distinctly sinuate basally, the angles very obtuse, broadly reflexed, not prominent, but also scarcely blunt; anterior impression evident, the posterior rather deep, subangulate, the median stria strongly impressed; elytra two-fifths longer than wide, one-half wider than the prothorax, broadly parabolic in apical two-fifths,

distinctly wider behind the middle than at base, the sides broadly arcuate, the humeri moderately rounded; pedicel three-sevenths the basal width; first stria strong and deep, the second feeble, the others virtually obsolete, the second reappearing at apex; anterior fovea strong, at two-fifths. Length 2.2 mm.; width 0.8 mm. New Jersey. **oblitus** n. sp.

Color piceous-black, the head and prothorax dark rufous.....5

5—Body rather convex and strongly shining; form somewhat as in the preceding, but with relatively smaller head and prothorax; under surface blackish, the legs pale flavate; head small, more than two-thirds as wide as the prothorax, the eyes moderate in size, not prominent; sulci converging; antennæ piceous, the basal joint rufous, scarcely at all shorter than the elytra, the medial joints a little more than twice as long as wide, the second as in the preceding; prothorax relatively small, barely two-thirds wider than long, throughout almost as in *oblitus*, except that the feebly oblique sides posteriorly are not visibly sinuate, and that the anterior transverse impression is subobsolete; elytra relatively smaller, oval, one-half longer than wide, more than one-half wider than the prothorax, ogival in nearly apical half, much wider behind the middle than at base, the humeri more broadly rounded than in *oblitus*, the striation similar, except that the first and second striæ are even more abbreviated at base. Length 1.8–2.1 mm.; width 0.7–0.88 mm. New York (near the city). Four examples.....**cuneatus** n. sp.

A—Similar to *cuneatus* in general characters, except that the head and prothorax are relatively larger, the thoracic angles more reflexed; elytra barely over two-fifths wider than the prothorax, similar in general form but with the humeri more sharply rounded, and excepting that three or four striæ are more or less visible. Length 2.2 mm.; width 0.82 mm. North Carolina (Asheville). **appalachius** n. subsp.

Body slightly less convex and not so shining, the elytra less deep in color; under surface piceous, the legs flavate; head relatively even smaller than in *cuneatus*, barely two-thirds as wide as the prothorax, the eyes rather well developed, the sulci short and deep; antennæ piceous, with pale basal joint, three-fourths as long as the elytra, the medial joints twice as long as wide, the second much more conspicuously longer and thicker than the third than in *cuneatus;* prothorax much shorter, one-half wider than long, as wide at base as at apex, the moderately rounded sides becoming oblique and straight posteriorly, the angles very obtuse, not prominent; surface nearly as in the preceding species; elytra relatively larger, less oval, though a little wider behind the middle than at base, one-half longer than wide, nearly one-half wider than the prothorax, ogival in apical two-fifths; humeri moderately rounded; pedicel scarcely more than two-fifths as wide as the base; four striæ on each elytron are distinct, the sutural the deepest; anterior fovea but little before the middle. Length 2.1–2.15 mm.; width 0.75 mm. Iowa (Cedar Rapids),—Brendel. Two specimens.....**iowensis** n. sp.

6—Prothorax narrower at base than at apex.....7

Prothorax about as wide at base as at apex 11

7—Sides of the prothorax very oblique and evidently sinuate posteriorly. Form subparallel, distinctly convex, highly polished, the elytra without trace of minute sculpture; color rufo-testaceous, the head and a large central elytral cloud piceous, the latter forming a broad fascia which envelopes the side margins; legs flavate; head well developed, nearly four-fifths as wide as the prothorax, the eyes moderate but prominent; sulci deep, remote, perfectly parallel; antennæ slightly longer than the elytra, infuscate, flavate apically and at base, the second joint much longer than the third; prothorax four-fifths wider than long, the sides strongly rounded anteriorly, very oblique basally and slightly sinuate before the obtuse but prominent and greatly reflexed angles; margins well reflexed throughout; subbasal impression deep, angulate; base much narrower than the apex; elytra one-half longer than wide, barely a third wider than the prothorax; sides feebly arcuate; humeri distinct; first and second striæ distinct, subequal, all the others obsolete, except the third which is visible basally; anterior fovea near basal third. Length 1.8–2.0 mm.; width 0.72–0.75 mm. Isthmus of Panama (Colon),—Beaumont.
***beaumonti** n. sp.

Sides of the prothorax very moderately oblique behind and not evidently sinuate before the basal angles 8

8—Head unusually large, about as wide as an elytron 9

Head moderate, always distinctly narrower than an elytron 10

9—Form elongate, barely at all ventricose, polished, rather convex, the pronotum without minute sculpture, the elytra with extremely fine, close and feeble strigilation; head blackish, the prothorax pale flavo-testaceous, the elytra uniform pale brown; under surface and legs very pale testaceous; head four-fifths as wide as the prothorax, with moderate, prominent eyes, the sulci not very remote, parallel; antennæ as long as the elytra, brown, flavate at base and tip; prothorax almost one-half wider than long and barely narrower at base than at apex, widest at two-fifths from apex, the sides broadly, subevenly rounded, less so basally, with the obtuse angles moderately reflexed, their apices only minutely prominent; subbasal impression peculiar, being rather coarse and close to the basal margin; elytra one-half longer than wide, not quite one-half wider than the prothorax, just visibly wider behind the middle than at base, the humeri distinct; pedicel two-fifths the basal width; sutural stria deep and conspicuous, the second barely traceable, the others obsolete; anterior fovea near two-fifths. Length 2.4 mm.; width 0.8 mm. North Carolina (Southern Pines),—Manee . . . . . **columbiensis** Hayw.

Form rather less parallel, not so convex, not very shining, the elytra polished, the ground sculpture extremely minute on the pronotum and elytra; color blackish-piceous, the prothorax obscure rufous; under surface piceous, the legs pale flavate; head large, only very slightly narrower than the prothorax, the eyes unusually large and prominent, separated by between two and three times their width, the sulci moderate, rather distant; surface strongly micro-reticulate; antennæ slender, fully as long as the elytra, blackish, the basal

joint flavate; prothorax rather small, not quite one-half wider than long; base but slightly narrower than the apex, widest before the middle, the sides moderately and subevenly rounded and well reflexed throughout; obtuse basal angles without prominent apex and very abruptly though moderately reflexed, the puncture on the edge unusually small; subbasal impression feebly subangulate; elytra nearly three-fifths longer than wide, fully one-half wider than the prothorax and subparallel, with arcuate sides and distinct humeri; first and second striæ feebly impressed but distinct, the others subobsolete, except under oblique reflection; anterior fovea at two-fifths; male with the basal joint of the anterior tarsi alone large, internally prolonged. Length 2.1 mm.; width 0.75 mm. Northern Illinois (Highland Park) ..... **sagax** n. sp.

10—Body moderately convex, ventricose, the anterior parts relatively small, shining, with feeble sericeous lustre, the micro-strigilation of the elytra extremely fine and close; color very dark and uniform castaneous throughout above; under surface rufo-piceous, the legs flavate; head three-fourths as wide as the prothorax, the eyes rather large, prominent, the sulci deep; antennæ long and slender, blackish, the first three or four joints flavate, the second much longer than either the first or third; prothorax rather less than one-half wider than long, slightly narrower at base than at apex, the sides rounded, finely reflexed, oblique and becoming very slightly sinuate in about basal half, the angles obtuse, moderately reflexed; sides of the base very oblique; subbasal impression deep; a rather deep elongate impression near each side of the base is evident; elytra barely one-half longer than wide, fully two-thirds wider than the prothorax, slightly wider behind the middle than at base; first stria rather deep and broad, the second much feebler, the others indistinct or wanting; anterior fovea at two-fifths. Length 2.5 mm.; width 1.0 mm. Texas (Austin) ..... **ventricosus** Lec.

Body moderately convex, rather shining, especially the elytra, the close strigilation of the pronotum and elytra extremely fine; color rufotestaceous, the head slightly infumate between the eyes, the elytra sometimes slightly clouded except basally; legs pale flavate; head two-thirds as wide as the prothorax, the eyes moderate in size, rather prominent. the sulci deep, parallel; antennæ piceous, gradually pale basally, as long as the elytra, the second joint as long as the first, much longer than the third; prothorax fully one-half wider than long, the margins moderately reflexed, the basal angles strongly; base distinctly narrower than the apex; sides rounded, oblique and straight posteriorly, the angles obtuse and slightly blunt; subbasal impression moderate, feebly angulate; elytra barely one-half longer than wide, not quite one-half wider than the prothorax, subparallel, with arcuate sides and rather broadly rounded humeri; pedicel two-fifths the basal width; striation as in the preceding; anterior fovea at two-fifths. Length 2.15–2.3 mm.; width 0.82 mm. Two examples from the Levette collection, probably taken in Indiana. .... **gentilis** n. sp.

11—Prothorax always much less than twice as wide as long 12

Prothorax much shorter and more transverse, very nearly twice as wide as long; species much smaller in size. Texas.....19

12—Elytra pale, with a large subcentral cloud or broad fascia; species the largest of the genus.....13

Elytra uniform in color throughout; species moderate in size.....18

13—Elytra more elongate, about twice as long as the head and prothorax together. Body elongate-suboval, rather convex, moderately shining, blackish-piceous, the elytra flavo-testaceous, with a large central piceous cloud, not attaining the sides; under surface nearly black, the legs and epipleura pale flavate; head very moderate in size, with moderate but prominent eyes, the sulci deep, parallel, not very remote; antennæ slender, piceous, gradually pale basally, the medial joints scarcely three times as long as wide; prothorax not quite one-half wider than long, the sides rounded anteriorly, oblique and nearly straight in about posterior half, the obtuse angles reflexed and feebly prominent, or thickened by the setigerous puncture; subbasal impression deep, obtusely subangulate, the depressed surface between it and the base longitudinally strigose; abbreviated stria deeply impressed; elytra elongate-oval and nearly three-fifths longer than wide, one-half wider than the prothorax, widest about the middle, the sides arcuate; four or five striæ are easily traceable, the first and second deepest; anterior fovea near basal third. Length 2.4–2.8 mm.; width 0.9–1.1 mm. New Jersey to Indiana and Illinois. Moderately abundant.....**proximus** Say

Elytra less elongate, never twice as long as the head and prothorax, more oblong as a rule and sometimes rather less convex.....14

14—Head notably small, the prothorax large, with the sides distinctly sinuate near the angles, being parallel for some distance; eyes notably flattened. Form oblong-suboval, rather convex, shining, rufotestaceous, the head not so bright as the pronotum; elytra more flavate, the central blackish cloud large, rounded and wholly discal; under surface pale, the legs flavate; head barely three-fifths as wide as the prothorax and very much narrower than an elytron, the sulci rather narrow, deep and distant; antennæ only moderately slender, fuscous, paler basally, fully as long as the elytra; prothorax one-half wider than long, the sides distinctly reflexed, rounded anteriorly, oblique posteriorly, the angles reflexed, right and sharp, the sides of the base toward the angles transverse, not oblique; subbasal impression rather deep, subangulate; elytra barely one-half longer than wide, scarcely two-fifths wider than the prothorax, oblong, parallel, with rather strongly arcuate sides and moderately rounded humeri; pedicel nearly half as wide as the base; striæ one and two deep and strong, three to five feeble, though impressed; anterior fovea at basal third. Length 2.8 mm.; width 1.15 mm. Rhode Island (Boston Neck).....**rhodeanus** n. sp.

Head relatively larger, the prothorax smaller and with the oblique sides posteriorly never more than very faintly sinuate near the always obtuse hind angles; base oblique at the sides; eyes moderate in size, distinctly less flattened.....15

15—Prothorax pale testaceous, similar in color to the ground of the elytra, the head dusky 16

Prothorax less abbreviated, darker, pale piceous, intermediate in color between the nearly black head and the flavo-testaceous ground of the elytra 17

16—Frontal sulci deep anteriorly and there separated by barely more than a third the maximum interocular width; eyes rather small and only moderately prominent. Body oblong-suboval, moderately convex, shining, the elytra but feebly sericeous; color testaceous, the broad submedian blackish fascia very nubilous; under surface pale, the legs flavate; head three-fourths as wide as the prothorax; antennæ flavate, as long as the elytra, the second joint very much longer than the third; prothorax nearly one-half wider than long, the sides anteriorly strongly rounded, oblique and nearly straight posteriorly, the obtuse angles with prominent apex, thickened by the rather large setigerous pore; subbasal impression deep, angulate, the median stria distinct; elytra slightly more than one-half longer than wide, not quite one-half wider than the prothorax, parallel, with distinctly arcuate sides; first three striæ more or less distinct, the fourth and fifth feebly glimpsible; anterior fovea near two-fifths, the posterior near apical sixth. Length 2.35–2.65 mm.; width 0.8–0.95 mm. District of Columbia and North Carolina (Asheville). Pennsylvania—LeConte ..... **scitulus** Lec.

Frontal sulci shallow and more widely separated, more strongly microreticulate than the rest of the surface; eyes much larger, conspicuously prominent. Body rather more broadly oblong, very moderately convex, shining, the elytra feebly sericeous; color pale testaceous, the submedian fuscous fascia narrower, more feeble and still more indefinite than in *scitulus;* under surface and legs very pale; head fully three-fourths as wide as the prothorax; antennæ long, slender, pale flavo-testaceous, even somewhat longer than the elytra, the second joint distinctly longer than the third; prothorax fully one-half wider than long, formed as in *scitulus*, except that the posteriorly oblique sides become slightly sinuate for a short distance before the obtuse and reflexed angles, which are less prominent or thickened at apex, the setigerous pore smaller; margins very distinctly reflexed; subbasal impression moderately deep, angulate, the anterior obsolete as in *scitulus*, the stria distinct; elytra oblong, one-half longer than wide, one-half wider than the prothorax, gradually parabolic in apical two-fifths; sides feebly arcuate, the humeri strongly rounded; striation and foveæ nearly as in *scitulus*. Length 2.55–2.65 mm.; width 0.9–1.0 mm. Iowa (Keokuk) and Mississippi (Vicksburg) ..... **pallescens** n. sp.

Frontal sulci as in *pallescens*, though slightly deeper, widely separated, the eyes similarly prominent but not quite so large. Body slightly shorter, oblong, moderately convex, similar in color and lustre, except that the head is only very slightly fuscous across the vertex and the submedial elytral fasciform cloud still fainter and more indefinite, sometimes barely traceable; antennæ flavate, not quite so long, though as long as the elytra; head proportionally as in *palles-*

cens; prothorax shorter and broader, two-thirds or more wider than long, the sides, basal angles and impressions similar; elytra shorter, scarcely more than two-fifths longer than wide, scarcely two-fifths wider than the prothorax, more rapidly and subobtusely rounded behind, the sides feebly arcuate; striation and foveæ nearly similar; five striæ are easily discernible, the sutural stronger than the others. Length 2.3–2.5 mm.; width 0.75–0.85 mm. Texas (Austin).

hyalinus n. sp.

17—Body oblong-suboval, broad, rather convex, shining; elytra pale yellowish-brown, with the faintest possible transverse cloud behind the middle, even this sometimes wanting; under surface piceous-black, the legs and epipleura flavate; head three-fourths as wide as the prothorax, half as wide as the elytral base, the sulci deep, widely separated; eyes moderate but rather prominent, the tempora behind them a fourth as long and evenly continuing their outward curve to the neck; antennæ fuscous, with flavate basal joint, barely as long as the elytra; prothorax scarcely one-half wider than long, widest at anterior two-fifths, the sides arcuate, oblique and nearly straight posteriorly to the reflexed, obtuse and not apically prominent angles; margins finely reflexed anteriorly, gradually broadly so posteriorly; subbasal impression deep, moderately arcuate; elytra broad, scarcely one-half longer than wide, two-thirds wider than the prothorax, rapidly ogival in posterior two-fifths, the sides arcuate; five striæ are distinctly observable, increasing in depth inwardly; anterior fovea at basal third. Length 2.65–2.7 mm.; width 1.0–1.1 mm. New York (near the city).....**temporalis** n. sp.

Body suboval but less broad, shining, the head black; prothorax piceous, the elytra pale brownish-flavate, with a very large central black area, not attaining the sides, somewhat as in *proximus;* under surface black, the legs and epipleura flavate; head nearly four-fifths as wide as the prothorax, much more than half as wide as the elytral base, the sulci deep, with convex intermediate surface, moderately separated; eyes and tempora as in the preceding; antennæ rather longer than the elytra, fuscous, paler basally; prothorax two-fifths wider than long, the rounded sides becoming oblique and straight posteriorly, very feebly sinuate near the reflexed obtuse angles; anterior impression evident, the subbasal deep, broadly arcuate, the median stria connecting them deep and conspicuous; elytra scarcely one-half longer than wide, two-thirds wider than the prothorax, ogival in apical two-fifths, slightly wider behind the middle than at base; sides arcuate, the humeri rather broadly rounded; pedicel less than one-half the basal width; first and second striæ distinct, the third feeble, the others obsolete; anterior fovea rather before basal third. Length 2.6–2.75 mm.; width 0.9–1.0 mm. Mississippi (Vicksburg).....**nubifer** n. sp.

18—Form not broadly suboval, rather convex, shining, the head blackish, the pronotum rufo-piceous, the elytra pale rufo-testaceous, feebly clouded with piceous, except broadly toward base and sometimes at apex; under surface rufo-piceous, the legs flavate; head well developed, fully three-fourths as wide as the prothorax and sub-

equal in width to an elytron; sulci short, rather deep; eyes very moderate but prominent, their outline continuing to the neck and without intervening tempora; antennæ fuscous, paler basally, moderately slender, as long as the elytra; prothorax short, evidently more than one-half wider than long, the sides well reflexed, broadly arcuate, moderately oblique and straight posteriorly, the angles obtuse, reflexed and very slightly prominent; sides of the base strongly oblique; anterior impression slightly visible at the middle, the subbasal deep, broadly angulate; elytra one-half or more longer than wide, two-fifths wider than the prothorax, ogivally rounding in nearly apical half, barely at all wider behind the middle than at base, the sides arcuate; pedicel two-fifths as wide as the base; first and second striæ deeply impressed and subequal, the third fine and very feeble, the others obsolete except basally; anterior fovea at basal third to two-fifths. Length 2.0–2.5 mm.; width 0.7–0.88 mm. New York (Willets Point, Long Island). Not uncommon.

obliquus n. sp.

Form more broadly oblong-oval, rather less convex, shining, the elytra with feeble sericeous lustre; upper surface blackish-piceous throughout, beneath blackish, the epipleura and legs pale; head relatively not so large as in the preceding, three-fourths as wide as the prothorax but distinctly narrower than an elytron, the eyes noticeably larger and still more prominent; antennæ more slender, dusky, fully as long as the elytra; prothorax in outline and structure as in *obliquus* but not quite so abbreviated, one-half wider than long; base sometimes a little narrower than the apex; elytra broader and rather less convex, one-half longer than wide and two-fifths wider than the prothorax, nearly similar in outline and striation. Length 2.2–2.5 mm.; width 0.8–0.92 mm. Rhode Island (Boston Neck). Abundant. New York—LeConte. [*Tachys corruscus* Lec.].

coruscus Lec.

Form oblong-suboval, very moderately convex, shining, the elytra subæneo-sericeous; color as in *coruscus;* head scarcely three-fourths as wide as the prothorax and not quite as wide as an elytron, the sulci deep, parallel, moderately distant; eyes well developed and prominent as in *coruscus;* antennæ similarly slender but shorter, not quite as long as the elytra, blackish, with paler basal joint, the medial joints not quite three times as long as wide; prothorax as in *coruscus* but less abbreviated, two-fifths wider than long, the obtuse basal angles similarly reflexed but not at all prominent: side margins more finely reflexed; base fully as wide as the apex, sometimes a little wider; elytra nearly as in *coruscus* in form and proportion; first stria deep, the second nearly as distinct, the third fine but observable, the others very feebly and only partially glimpsible; anterior fovea near basal third. Length 2.0–2.4 mm.; width 0.7–0.83 mm. Mississippi (Vicksburg).....**æneipennis** Mots.

19—Body oblong-suboval, rather depressed and shining, the elytra with feeble sericeous lustre; color uniform reddish-castaneous throughout above, the head black; under surface piceous-black, the legs and epipleura flavate; head well developed, as wide as an elytron and four-

fifths as wide as the prothorax, the sulci widely diverging posteriorly, feebly convergent anteriorly; eyes notably large, very prominent; antennæ as long as the elytra, piceous, the basal joint flavate; prothorax three-fourths wider than long, widest at apical third, the sides there evenly rounded, oblique and straight in somewhat more than basal half, the angles obtuse, reflexed and blunt at apex; subbasal impression rather deeply impressed, angulate; elytra fully one-half longer than wide, somewhat more than one-half wider than the prothorax and subcircularly rounded in apical third, parallel, with slightly arcuate sides and abruptly rounded humeri; all five striæ are distinct to feeble; foveæ strong, near two-fifths and five-sixths. Length 2.0 mm.; width 0.8 mm. Texas (El Paso). A single example taken by the writer..... **spadix** n. sp.

Body oblong-suboval, moderately convex, shining, uniformly castaneous-brown, the head a little darker; under surface dusky testaceous, the legs and epipleura flavate; head well developed, though scarcely as wide as an elytron, three-fourths as wide as the prothorax, the sulci as in *spadix;* eyes relatively even larger, very prominent; antennæ fuscous, the basal joint flavate, slightly longer than the elytra; prothorax shorter and broader, very nearly twice as wide as long, the sides rather widely reflexed, broadly rounded, gradually very moderately oblique and straight behind, the reflexed angles very obtuse and blunt, the subbasal impression deep, broadly angulate; elytra shorter, barely wider behind the middle than at base, barely one-half wider than the prothorax and rather less than one-half longer than wide; apex ogivally rounded; sides feebly arcuate, the humeri narrowly rounded; first and second striæ distinct, the third subobsolete, more evident and widely impressed basally, the others obsolete; anterior fovea deep, at three-sevenths. Length 1.82 mm.; width 0.8 mm. Texas (Houston). A single example taken by the writer. **laxicollis** n. sp.

Body narrower, still smaller, moderately convex and shining, pale-flavo-testaceous in color throughout, the head piceous-black; legs pale flavate; head relatively still larger, with large and very prominent eyes, fully four-fifths as wide as the prothorax and somewhat wider than an elytron; sulci anterior and moderate, the posteriorly diverging part very fine: antennæ fuscous, with flavate basal joint, slender, as long as the elytra, the second joint even somewhat longer than the first, one-half longer than the third; prothorax a little more than one-half wider than long, the sides subevenly, not strongly rounded anteriorly, feebly oblique and straight posteriorly, the obtuse and blunt angles well reflexed, the anterior angles rounded as usual; subbasal impression deep, subarcuate, the surface between it and the basal margin swollen; elytra parallel, with evenly and moderately arcuate sides, slightly more than one-half longer than wide and rather less than one-half wider than the prothorax, almost circularly rounded in apical third, the humeri narrowly rounded; striæ one to four visible, gradually decreasing in depth; anterior fovea near two-fifths. Length 1.75–1.8 mm.; width 0.65 mm. Texas (Brownsville),—Wickham. Three specimens. . **vernilis** n. sp.

The species above described as *pumilus* Dej., fits the meagre description very well, especially in the darker opalescent posterior cloud on the elytra, which is also alluded to by Chaudoir as a distinctive feature; but its locality is rather remote from Louisiana, this being of but little moment however, as no locality for *pumilus* is given by Dejean, and it may just as well have been Florida as Louisiana. *Appalachius*, because of the much larger head and prothorax, is in all probability a species distinct from *cuneatus*, but, as it is represented only by a single individual, it may be left in subordinate rank for the present.

The two Panama species included above, seem to be different from anything described by Motschulsky; *beaumonti* resembles *flavicollis* in some respects, but the elytral cloud is sutural in the latter, and the length and width as given by the author are very much less, being 1.5 by 0.6 mm. The author also states that in *flavicollis* the frontal sulci approach each other anteriorly.

The species allied to *proximus* and *scitulus* have been somewhat misunderstood and confused in nearly all collections, but they are really well differentiated. For example, *proximus* itself is an isolated species, not closely related to any other by reason of its regularly oval and very elongate elytra, larger size, notably convex surface and by the central elytral blackish plaga not attaining the sides, and therefore not having the form of a fascia as it has in *scitulus*. *Nubifer* has an identical coloration and form of the central plaga, but the elytra differ very much, being shorter and broader and the prothorax is relatively much larger. *Scitulus*, *pallescens* and *hyalinus* are allied species, forming a coherent group of a different type from *proximus*, having an elytral cloud-like fascia from side to side, becoming almost obsolete in *hyalinus;* this and *pallescens* differ from *scitulus* in the more widely separated frontal sulci, much larger and more prominent eyes and more pallid general coloration; *scitulus* is confined to the Atlantic slope of the Appalachians, *pallescens* to the Mississippi Valley and *hyalinus* to central Texas, so far as now known. *Rhodeanus* is a remarkably distinct species in its small head, with flattened eyes and relatively large prothorax, having the sides of the base transverse and not oblique as in all the other species, and in the sharp right basal angles. *Temporalis* is also well differentiated by its very ventri-

cose outline, convex surface, almost obsolete dark elytral plaga and by the form of the eyes and tempora; its nearest relative is the smaller and less ventricose *nubifer*, from more southern latitudes.

There are before me two specimens that I fail entirely to comprehend. They are of an intense shining black throughout and, in outline and striation, much resemble *nubifer* or *temporalis*. I have had occasion before (Mem. Col., V, 1914, p. 299) to call attention to entirely deep black specimens, in that case belonging to the genus *Agonoderus*. Whether this condition is pathologic or not it is impossible to surmise; they were all, both *Tachys* and *Agonoderus*, found unlabeled in the Levette collection, but do not appear to have been stained, either by accident or otherwise. I should be much interested to know whether others have observed anything similar.

Group II—*vittiger*

Subgenus **Isotachys** nov.

The somewhat less numerous species of this very distinct group, are distinguished from those of *Tachys* proper primarily by the position of the dorsal foveæ of the elytra, which here are on or attached to the inner side of the third stria; they also differ very much in having the second and third joints of the antennæ equal in length, the sides of the prothorax less reflexed, the frontal sulci less distinct and in the narrower, more parallel form of the body. The base of the prothorax, instead of being generally oblique at the sides as in *Tachys*, is here transverse usually, with the angles right; but there are exceptions in both subgenera in regard to this feature. The recurved part of the sutural stria is almost exactly as in the true *Tachys*, and the posterior fovea is likewise more or less near and within the hamate anterior limit of the recurvature.

Some of the described species are not at present in my collection, but such as are represented before me may be rather easily differentiated as follows:

Base of the prothorax transverse and straight laterally.....2
Base oblique at each side.....9
2—Color deep black, the elytra sometimes vittate.....3
Color not black.....4
3—Body elongate, parallel, moderately convex, shining, deep black, the elytra each with a wide flavate vitta outside the axial line, from base to apical fifth, reduced in some individuals and frequently wholly

wanting; under surface black, the legs flavate; head micro-reticulate, well developed, the eyes rather large and prominent, the sulci moderate, parallel, widely separated; antennæ piceous, paler at base, nearly three-fourths as long as the elytra, the medial joints fully twice as long as wide; prothorax not quite one-half wider than long, nearly as wide at base as at apex, the sides evenly rounded, becoming gradually less so and more oblique posteriorly, sinuate at base, the angles right, sharp and feebly reflexed; anterior impression obsolete, the subbasal fine, sulciform, finely punctate and obtusely angulate, the stria feeble; surface without distinct ground sculpture; elytra elongate, fully three-fifths longer than wide, two-fifths wider than the prothorax, rounded in rather less than apical third, the sides parallel and nearly straight; humeri sharply rounded; base truncate; first stria deep, the second less deep, the third very feeble; anterior fovea at three-sevenths; ground sculpture of transverse micro-reticulation not so fine or strigiliform as in *Tachys* proper, the lustre therefore not sericeous. Length 2.25–2.65 mm.; width 0.68–0.8 mm. California (San Diego). Abundant. . . . **vittiger** Lec.

Body smaller, elongate, deep black and shining throughout; legs black, the tibiæ and tarsi piceous; ground sculpture as in *vittiger*, except that the micro-reticulation of the pronotum is nearly as strong as that of the head and that of the elytra even coarser than in *vittiger;* head smaller, scarcely three-fourths as wide as the prothorax and somewhat narrower than an elytron; sulci very broad, parallel, the eyes smaller than in *vittiger*, similarly nude as usual; antennæ black throughout, much shorter than in the preceding, barely two-thirds as long as the elytra, the medial joints barely one-half longer than wide; prothorax one-half wider than long, even somewhat wider at base than apex, widest even less anteriorly than in *vittiger*, the sides more broadly, subevenly rounded, straight basally, the angles slightly obtuse and minutely subprominent at tip; sides of the base transverse and straight; subbasal groove fine, rugose, broadly subangulate; elytra but little over one-half longer than wide, barely a third wider than the prothorax, the outline as in *vittiger*, except that the parallel sides are slightly arcuate and the humeri somewhat less abruptly defined; first two striæ rather deep, especially the first; beyond the second only occasional glimpses of fine striæ are obtainable; anterior fovea at three-sevenths. Length 2.2–2.5 mm.; width 0.7–0.85 mm. Utah (Provo),—Wickham. Four examples.

funebris n. sp.

4—Reflexed elytral margin crenate or serrulate for a short distance behind the humeri; disk of the elytra not paler laterally 5

Reflexed margin smooth, without trace of post-humeral serrulation; disk of the elytra with paler marking laterally, except apparently in *occultator* 8

5—Tips of the elytra flavate 6

Tips of the elytra concolorous, not at all flavate 7

6—Form rather narrow, parallel, moderately convex and shining, the head distinctly, the pronotum feebly, micro-reticulate, the elytra with finer sculpture in transversely broken lines; color rufous, the elytra

dark castaneous, with flavate apex; under surface obscure rufous, the legs flavate; head nearly four-fifths as wide as the prothorax, with very moderate but prominent eyes and feeble remote sulci; antennæ short, fusco-testaceous, paler basally, two-thirds as long as the elytra, the medial joints barely twice as long as wide; prothorax three-fifths wider than long, somewhat narrower at base than at apex, the sides broadly rounded, becoming rapidly sinuate and parallel in basal fifth, the angles acute, not reflexed but prominent, the seta distinctly before the angles; subbasal sulcus fine, feeble, subpunctate, the margin feebly tumid; elytra two-thirds longer than wide, two-fifths wider than the prothorax, the parallel sides barely visibly arcuate, the humeri sharply rounded; apex not obtuse; pedicel two-fifths the basal width; first and second striæ subequal and distinct, the others barely glimpsible, the anterior fovea at three-sevenths. Length 2.25 mm.; width 0.75 mm. New Jersey (Atlantic City) ..... **litoralis** Csy.

Form stouter, rather convex, more shining, clearer rufous in color almost throughout, the apex more flavate, with a piceous shading immediately adjoining the flavate area; under surface and legs testaceous; head and pronotum much more feebly micro-reticulate; head relatively smaller, fully two-thirds as wide as the prothorax, the eyes nearly similar but not quite so prominent; sulci still feebler; antennæ longer, three-fourths as long as the elytra, fusco-testaceous, more flavate basally, the sixth joint fully twice as long as wide or somewhat more; prothorax as in *litoralis*, but less abbreviated and with the basal angles simply right, sharp but not prominent, the subbasal sulcus still finer and with the surface between it and the base flat; elytra broader, one-half longer than wide, nearly one-half wider than the prothorax, more obtusely rounded behind but otherwise almost similar in outline; first and second striæ coarser, more deeply impressed, the third and fourth fine and feeble but distinctly observable; the type specimen has no trace of the anterior fovea on either elytron. Length 2.35 mm.; width 0.85 mm. Virginia (Fortress Monroe) ..... **omissus** n. sp.

7—Form similar but a little more abbreviated, oblong, rather convex, shining, the ground sculpture nearly as in the preceding, that of the elytra stronger; color dark rufous, the elytra very slightly castaneous; under surface and legs dark, though pure, rufous; head as in *omissus* but a little larger and with slightly more prominent eyes, fully three-fourths as wide as the prothorax, the antennæ similar, the fifth joint fully twice as long as wide; prothorax shorter, fully three-fifths wider than long and as wide at base as at apex, the sides less inflated and more feebly rounded, becoming feebly sinuate only at, and not well before, the sharp right angles; margins similarly narrowly reflexed and also with very fine median stria, the subbasal sulcus finer and still feebler; elytra still shorter, barely one-half longer than wide, similar in the general outline and obtuse apex, the parallel sides very feebly arcuate, the humeri narrowly rounded, two-fifths wider than the prothorax; first and second striæ broadly and deeply impressed and subequal in depth, three to five barely

glimpsible; anterior fovea at three-sevenths. Length 2.33 mm.; width 0.83 mm. Texas (Galveston). Two examples.

luridicollis n. sp.

Form oblong, somewhat smaller and relatively stouter than in the preceding, shining, similar in color and ground sculpture, but with the head slightly infuscate and the elytra piceous-black; head nearly similar, relatively larger than in *omissus*, the eyes moderate, rather prominent; antennæ piceo-testaceous, flavate basally, shorter than in the preceding, barely two-thirds as long as the elytra, the fifth joint distinctly less than twice as long as wide; prothorax almost exactly as in *luridicollis* and fully as wide at base as at apex, but with the sides sinuate at a greater distance from the base, becoming parallel in basal fifth or sixth, the angles right and very sharp; elytra scarcely one-half longer than wide, two-fifths wider than the prothorax, parallel, with feebly arcuate sides, the humeri even more narrowly rounded than in the preceding species; apex broadly, obtusely rounded; striation and foveæ as in the preceding. Length 2.2 mm.; width 0.78 mm. Mississippi (Pass Christian).

torrescans n. sp.

8—Body stout, subparallel, rather convex and shining, the head distinctly, the pronotum very obsoletely, micro-reticulate, the transverse reticulation of the elytra finer, closer and more strigiliform than in the preceding-section; color bright rufous, the head deeply infumate, the elytra piceous, each with a large elongate irregular external flavate spot in basal half and a smaller one near apical fourth; under surface rufous, the abdomen black, the legs rufous; head three-fourths as wide as the prothorax, with moderately large and rather prominent eyes, the sulci feeble and remote; antennæ fuscous, paler basally, three-fourths as long as the elytra, the fifth joint fully twice as long as wide; prothorax one-half wider than long, about equally wide at base and apex, the sides strongly, subevenly rounded to a basal parallel part of about a sixth or seventh the total length; angles right, very sharp and more reflexed than in the preceding section, but with the puncture on the edge similarly in advance of the angle; subbasal groove fine, impressed, being a chain of irregular punctures, the basal surface flat; elytra four-sevenths longer than wide, two-fifths wider than the prothorax, parallel, with feebly arcuate sides and moderately distinct humeral angle, evenly parabolic in apical third; first stria rather strong, the second finer and beyond with barely any trace of striation; anterior fovea barely visibly in front of the middle. Length 2.4–2.6 mm.; width 0.8–0.9 mm. Texas (Galveston). [*Tachys occultator* Hayw. nec Csy.].

pugnax n. sp.

Body stout, subparallel, rather convex, shining, similar to *pugnax* in the minute ground-sculpture and general form, but with relatively much smaller prothorax; color of the head piceous, of the prothorax bright rufous, of the elytra castaneous, with the entire sides broadly and nubilously flavate, most broadly so in basal half; under surface rufous, the abdomen nearly black, the legs flavate; head four-fifths as wide as the prothorax, the eyes rather more prominent than in

the preceding; antennæ fuscous, paler basally, much longer than in *pugnax*. four-fifths as long as the elytra, the fifth joint two and one-half times as long as wide; prothorax in form nearly similar, but somewhat less arcuate at the sides, which are similarly parallel at base, the very sharply rectangular angles likewise minutely subprominent; surface as in *pugnax;* elytra as in the latter, except that they are at least three-fifths wider than the prothorax and not over one-half longer than wide; humeri more widely exposed at base; striæ similar, the fovea at the middle. Length 2.5 mm.; width 0.9 mm. Texas (Brownsville),—Wickham.....**subtropicus** n. sp.

Body in form somewhat as in the two preceding; color reddish-testaceous, the head nearly black; elytra apparently without lateral pallidity; under surface rufous, the abdomen blackish; legs pale; head moderate in size, the eyes somewhat prominent; antennæ about as long as the head and prothorax, the latter but slightly wider than the head, one-half wider than long; sides arcuate, feebly sinuate at base, the angles prominent and sharp; base very slightly narrower than the apex; scutellum slightly longer than wide; elytra wider than the prothorax, obtusely rounded behind, the first stria strong, the second feeble, the third faintly traceable; anterior fovea at the middle; abdomen sparsely clothed with erect pubescence toward tip, the last segment with four equidistant setæ at apex. Length 2.8 mm. New Jersey (Cape May).....**occultator** Csy.

9—Form rather stout, oblong, rather convex, highly polished, piceous-black, the elytra sometimes nubilously rufescent along the suture toward base; under surface piceous, the abdomen black; legs and epipleura flavate; head medially and the pronotum without minute ground-sculpture, the elytra with transverse wavy reticulation; head two-thirds as wide as the prothorax, with very moderate but prominent eyes, the sulci irregular, distant; antennæ flavo-testaceous, nearly four-fifths as long as the elytra, the fifth and sixth joints distinctly more than twice as long as wide, the second thicker and very slightly longer than the third; prothorax three-fifths wider than long, the sides broadly rounded, oblique and straight basally to the obtuse reflexed angles; base as wide as the apex; subbasal sulcus deep and arcuate, the surface between it and the base tumid; elytra barely one-half longer than wide, about two-fifths wider than the prothorax, obtusely rounded behind, parallel, with broadly arcuate sides and moderately rounded humeri, the pedicel two-fifths the basal width; first and second striæ well impressed, subequal in depth, two or three external to the second vaguely observable; anterior fovea at two-fifths to three-sevenths. Length 2.0–2.4 mm.; width 0.75–0.88 mm. Texas (Galveston). Nine specimens.
bradycellinus Hayw.

Form slender, narrower than any other species, deep black and shining, the legs obscure, the femora blackish; micro-reticulation distinct throughout, transversely wavy and unusually coarse on the elytra; head fully four-fifths as wide as the prothorax, the sulci feeble and very remote; eyes rather small, only very slightly convex; antennæ short, fuscous, three-fifths as long as the elytra, the medial

joints one-half longer than wide; prothorax a little less than one-half wider than long, the sides broadly, subevenly rounded and finely reflexed almost throughout, becoming very faintly sinuate toward the slightly obtuse angles, the apices of which are minutely acute and prominent, only slightly reflexed, the seta on the edge very little in advance of the angle; subbasal sulcus rather fine, deep, the surface thence to the base slightly tumid; elytra fully three-fourths longer than wide, scarcely over a third wider than the prothorax, circularly rounded in barely apical third, the parallel sides just visibly arcuate; pedicel less than half the basal width; first and second striæ very shallow, feeble, subequal in depth, the others not observable; anterior fovea small, at three-sevenths. Length 2.2 mm.; width 0.62 mm. California (San Diego)..... **esurialis** n. sp.

Form shorter and stouter than in the preceding, oblong-suboval, moderately convex, shining, micro-reticulate, black to piceous in color, the legs piceous; head distinctly narrower than the prothorax, the eyes well developed and prominent; antennæ slender, piceous, fully three-fourths as long as the elytra, the medial joints twice as long as wide; prothorax somewhat more than one-half wider than long, equally wide at base and apex, the sides moderately rounded, oblique and nearly straight posteriorly, the angles obtuse, slightly prominent at tip and distinctly reflexed; subbasal impression deep, sulciform; median stria well impressed; elytra barely one-half longer than wide, about one-half wider than the prothorax, evenly parabolic in apical third, the parallel sides feebly arcuate; striæ one to three or four detectible, though feeble even near the suture; anterior fovea slightly ante-median. Length 2.2 mm.; width 0.78 mm. California (Yuma Reservation; two females taken by the writer) and Utah (southwestern; one female taken by Mr. Weidt)..... **corax** Lec.

It is possible that the species described above under the name *funebris*, may be one of those confounded with *corax* by Hayward, but, though the basal angles of the prothorax are more than right, their apex is more acutely prominent, and the sides of the base seem to be truly transverse and not oblique, as they are very obviously in *corax;* besides this, the entire form of the body is strikingly different, *funebris* being parallel, with the elytra but slightly wider than the prothorax.

The four species from *litoralis* to *torrescans* constitute a well differentiated section of the subgenus, characterized, among other ways, by the feebly serrate or crenulate margin of the elytra toward the humeri; *litoralis* bears no resemblance in any particular to the much larger—3 mm.—*pallidus* of Chaudoir, to which it was assigned by Horn, followed by Hayward, although *pallidus*, because of its general characters, probably belongs to the subgenus *Isotachys*.

The next three species, *pugnax*, *subtropicus* and *occultator*, also constitute a well marked section. The type of *occultator* no longer being in my collection, I have been compelled to cull the above characterizations from the original lengthy genero-specific description (Cont. Descr. and Syst. Col. N. A., II, p. 69), the greater part of the verbiage being superfluous. I consider *occultator* to be different from *pugnax*, which was one of the forms included under that name by Hayward. In *pugnax* the last ventral segment of the male is smooth, with two apical setæ; in the female the surface of the last segment has fine sparse punctures throughout, each bearing an infinitesimal erect hair, and the apex has four setæ—these being the usual conditions in the subgenus.

The type of *esurialis* seems to be a female, and I have associated with it for the present, a second female, which agrees in almost all characters, except that the body is notably less slender, with broader head, larger prothorax, slightly more convex eyes and shorter elytra, these being but little more than one-half longer than wide; but the peculiarly short antennæ are similar in both examples, and, in looking over a large series of *vittiger*, correspondingly striking individual differences occur. The two examples associated above to represent *corax* Lec., also differ perceptibly, for, besides the deep black body and blacker femora of the Utah specimen, it has the head evidently smaller and the elytra rather more elongate than the two examples from Yuma; but, having no accurate knowledge of the type, I am obliged to call them both *corax*. I have seen no indication of the elytral vitta noted by Hayward as visible in certain individuals of *corax*.

In species having the basal thoracic angles obtuse and the sides of the base oblique, the posterior seta on the upturned edge is often at or very close to the angle, as in *bradycellinus* for instance, and not far in advance of the angle as it is in *litoralis* and allied forms having sharp right angles.

Group III—*lævus*

Subgenus **Microtachys** nov.

Although allied in some respects to the *corax* section of *Isotachys*, especially in the obtuse basal angles of the prothorax and oblique sides of the base, as well as in the position of the elytral foveæ on,

or just inside of, the third stria, the few known species of this group differ radically in the peculiarly short moniliform antennæ and in having the apical recurvature of the sutural stria very short. It results from this, that the posterior fovea, not being behind the hooked end of the recurvature, as it is in *Tachys* and *Isotachys*, has a position more anterior and more conformable to its usual position in the Bembidiinæ. The *lævus* group differs from any other of the allies of *Tachys* in the very minute size of the body, and it includes some of the smallest known Carabids.* The eyes are small or moderate, and the frontal sulci are reduced to small and feeble, widely separate, anterior impressions; the surface is moderately convex and is nearly always distinctly micro-reticulate, though never distinctly dull in lustre. The second antennal joint is very much longer than the third, even more strikingly so than in *Tachys* proper, and in this respect it differs greatly from *Isotachys*. The last segment of the outer maxillary lobe is extremely slender.

After reading carefully the description of the very much larger *Tachys trechiformis* of Hayward, which the author includes in the *lævus* group, I am convinced that it does not belong there, but should form a separate subgeneric group of the genus. *Rufotestaceus* is also an aberrant species, which, unlike any of the others, is Sonoran in habitat; it is especially peculiar in the sinuate sides of the prothorax basally and in having four punctulate discal striæ. I obtained a single example at its extreme eastern limit of distribution in Texas.

The species of *Microtachys*, so far as known to me, may be described as follows:

Elytra with but one or two distinct striæ 2
Elytra with four subequal and slightly punctulate striæ; hind angles of the prothorax sharper, better defined by a short feeble sinus. 6
2—Hind body short, broadly oval, the elytra but little longer than wide. Surface rather notable convex, shining, piceous-black, the prothorax faintly rufous; under surface and legs obscure rufous, the abdomen black; head feebly, the pronotum very obsoletely, micro-reticulate,

* The remarkable *Polyderis minuscula* of Motschulsky (Etudes, 1862, p. 36) is said to be only 0.8 by 0.2 mm. in dimensions, which, if correct, would indicate it to be by far the most minute Carabid known. Typical *Polyderis* is said by Bates to be nothing more than *Tachys*, but, as Motschulsky included diverse elements in his conception of *Polyderis*, it is probable that that disposition of it is not strictly final; *minuscula*, however, is too small for even *Microtachys*. *Scotodipnus* also includes very minute species, some of them probably smaller than any known *Microtachys*.

the elytra rather closely reticulate in transverse broken lines; head convex, nearly three-fourths as wide as the prothorax, the eyes small, prominent, feebly setulose; antennæ slender, fuscous, paler basally, moniliform, barely two-thirds as long as the elytra; prothorax one-half wider than long, equally wide at base and apex, the sides strongly rounded anteriorly, oblique and straight behind, the angles obtuse but not rounded, feebly reflexed; subbasal sulcus deep, angulate, the anterior impression broad and obvious, the stria fine; elytra two-fifths longer than wide, two-thirds wider than the prothorax, oval, with arcuate sides becoming straight basally, much wider just behind the middle than at base, the humeri obtuse; edge near and around the humeri bearing a series of minute erect setæ; sutural stria deep and distinct, the second fine and feeble; foveæ near basal and apical third. Length 1.2–1.4 mm.; width 0.45–0.55 mm. Virginia (Norfolk). Five examples..... **congestus** n. sp.

Hind body longer, not so broadly oval.....3

3—Body elongate-oval, strongly convex, the integument rather thicker and firmer than usual. Color bright testaceous throughout, the head barely darker, the surface shining, the ground sculpture nearly as in the preceding; head two-thirds as wide as the prothorax, convex, the anterior impressions feeble; eyes small, not prominent, feebly setulose; antennæ fusco-testaceous, scarcely three-fifths as long as the elytra; prothorax formed nearly as in the preceding, the sides less strongly and more broadly rounded, straight only near the very obtuse but bluntly subprominent angles, the sides of the base notably oblique; subbasal impression deep, angulate, the anterior obsolete, the median stria fine; elytra notably long, almost evenly oval, widest at the middle, parallel, with arcuate sides, two-thirds longer than wide, only two-fifths wider than the prothorax; pedicel slightly less than half the basal width; minute erect setæ of the edge at and behind the humeri marking a very feeble serrulation; sutural stria rather deep, none other evident; foveæ minute, near basal and apical third. Length 1.2–1.3 mm.; width 0.35–0.45 mm. Pennsylvania. **unistriatus** n. sp.

Body more oblong, not so convex, sometimes distinctly depressed, the integument thinner as a rule.....4

4—Elytra long, parallel, but little wider than the prothorax. Body elongate, moderately convex, subparallel, pale brownish-testaceous in color throughout, shining, the pronotum without ground sculpture, the reticulation of the elytra fine and strigiliform; head three-fourths as wide as the prothorax, the eyes small, nude and prominent; antennæ fuscous, paler basally, scarcely three-fifths as long as the elytra; prothorax short, two-thirds wider than long, fully as wide at base as at apex—if not somewhat wider, the sides moderately rounded anteriorly, oblique and straight in about basal half, the angles obtuse, blunt, the sides of the base oblique; seta placed at the angle as usual in this group; subbasal sulcus deep, angulate, the anterior impression visible medially; elytra nearly three-fourths longer than wide, a third wider than the prothorax, evenly parabolic in fully apical third, the parallel sides feebly arcuate, the humeri

right and sharply rounded, the edge nearly as in the preceding; sutural stria moderate, the second very fine, the others obsolete; foveæ near basal and apical third as usual. Length 1.2 mm.; width 0.4 mm. Louisiana (Alexandria)..... **rectus** n. sp.

Elytra not so long, feebly inflated posteriorly, wider behind the middle than at base..... 5

5—Form oblong, slightly convex, shining, piceous to testaceous, the prothorax always paler and having the micro-reticulation perceptible though feeble; head two-thirds as wide as the prothorax, the eyes very small, slightly prominent, feebly setigerous; antennæ fuscous, paler basally, short as usual; prothorax one-half or more wider than long, the sides rounded, oblique and straight posteriorly, generally very feebly sinuate at the obtuse but not rounded angles, rendered slightly prominent by the well developed setigerous pore on the edge; anterior impression distinct medially, the subbasal sulciform and angulate; elytra scarcely one-half longer than wide, about two-fifths to one-half wider than the prothorax, the sides broadly arcuate, straighter basally; humeri slightly obtuse and moderately rounded; sutural stria deep and distinct; beyond this one or two fine and feeble striæ can usually be detected; foveæ behind basal and behind apical third. Length 1.1–1.25 mm.; width 0.35–0.4 mm. Rhode Island to Missouri, North Carolina, Mississippi and Texas (Galveston). Abundant. [*Bemb. troglodytes* Dej.]..... **lævus** Say

Form as in *lævus* but not so small in size, moderately convex, piceous-black, with dark red prothorax, shining, the sculpture similar; under surface black, paler anteriorly, the legs flavate, short and slender as usual; head rather large, more than three-fourths as wide as the prothorax, the eyes very small but prominent; antennæ a little longer though similarly moniliform, nearly three-fourths as long as the elytra; prothorax one-half wider than long, the anteriorly rounded sides becoming oblique and straight in nearly basal half, with a very small sinus adjoining the very obtuse and prominently rounded angles, the anterior impression subobsolete, the posterior as usual; elytra as in *lævus* but rather longer, fully one-half longer than wide, at base slightly, behind the middle fully, two-fifths wider than the prothorax; sutural stria coarse and deep; beyond this there are two or three other fine and feeble striæ; foveæ at basal and apical third. Length 1.3–1.35 mm.; width 0.45–0.5 mm. Mississippi (Vicksburg). Four specimens..... **flumenalis** n. sp.

Form and size as in the preceding but more depressed and paler in color, pale brown, the prothorax rufous; under surface nearly black posteriorly, the legs obscure flavate; sculpture similar; head similarly well developed, the eyes small and prominent; antennæ two-thirds as long as the elytra; prothorax as in *flumenalis* in outline, impressions and form of the hind angles; elytra nearly similar but narrower, and except that the second stria is almost as distinct as the first, the third also evident, the minute erect hairs on the edge near the humeri and the very feeble serration as in all the preceding species; posterior part of the lateral groove very irregular, the basal part obsolete and represented by three setigerous foveæ as usual in the subgenus.

Length 1.25–1.3 mm.; width 0.43–0.48 mm. Texas (Austin). Three specimens..... **diaphanus** n. sp.

6—Body oblong, subparallel, depressed, shining, feebly micro-reticulate as usual; color pale flavo-testaceous throughout; head rather less than three-fourths as wide as the prothorax, the anterior impressions evident, the eyes larger than in any other species but only moderately convex; antennæ slender, flavate, longer than in any of the preceding though submoniliform, nearly three-fourths as long as the elytra, the medial and outer joints about one-half longer than wide; prothorax very indistinctly narrower at base than at apex, one-half wider than long, the sides rather narrowly rounded anteriorly, oblique basally, becoming feebly sinuate toward the angles, which are right and very sharp, apparently without the usual seta; sides of the base oblique and sinuate, becoming transverse toward the angle; anterior impression distinct, the posterior deep, strongly angulate, the stria joining the two rather deep; elytra somewhat over one-half longer than wide, nearly one-half wider than the prothorax, parallel, with almost straight sides, rapidly obtusely rounding behind, the apices near the suture narrowly truncate; humeri narrowly and abruptly rounded, the edge near the base minutely setose and feebly serrulate; each has four fine but distinct equal striæ, which are feebly and irregularly punctulate; foveæ rather before basal and apical third. Length 1.5 mm.; width 0.5 mm. Texas (Austin). Arizona and California,—Hayward.

rufotestaceus Hayw.

There are several characters relating to *rufotestaceus* that, together, are almost sufficient to make of it a distinct subgeneric group of *Tachys*. The first and most important, if constant, is the absence of the universal setigerous puncture at or near the hind angle of the prothorax; in my single specimen there is no trace of the seta and careful search reveals no inequality of the edge resembling in any way a definite fovea, but more examples would have to be examined before coming to a final conclusion. The second character relates to the basally sinuate sides of the prothorax and acutely rectangular basal angles, the third to the four moderate subequal and punctulate elytral striæ and the fourth to the slightly longer antennæ and decidedly larger eyes. The species *trechiformis* of Hayward, will certainly constitute another well marked subgeneric group. So, in the course of time, there will be a considerable number of subgenera to record under *Tachys*, though probably not comparable with the number at present composing *Bembidion*. *Tachyura*, having the body oval, more strongly convex and with denser and thicker integument, is in no way closely allied to *Tachys* and should not be considered in close connection

therewith. The two following, however, bear a closer external resemblance to *Tachys*, though completely lacking the peculiar and highly characteristic foraminiform cavities of the mentum.

Tachyta Kirby

Tachymenis Mots. (pars)

The body in this genus is decidedly depressed and uniformly black, the integuments not very thin as in *Tachys*, but denser and always strongly and distinctly micro-reticulate above, the coarse reticulations of the elytra but slightly transverse and never in wavy lines; so no appearance of opalescence is ever observable. The head is moderate or rather small, with very moderate, rather coarsely faceted and feebly setulose eyes and narrow, very widely separated sulci near them; the antennæ are relatively short but not moniliform and have the second joint much shorter than the third, differing greatly also in this way from *Tachys*. The mentum is broadly and feebly bi-impressed, but exhibits no trace of the singular deep foraminiform foveæ of *Tachys* and *Pericompsus;* the mental sinus is not large and the sharp triangular tooth is well developed; the palpi are moderate and the last segment of the outer maxillary lobe tapers gradually to a fine apex. The hind thoracic angles are distinct, setigerous as usual and not reflexed; sometimes there is an obvious carina; the subbasal impression is never sulciform as it is in *Tachys*. The elytra are oblong, always with a number of fine and sometimes feebly punctulate striæ, the sutural recurved at apex, the long deep recurvature lying very near the posterior part of the lateral stria, which is only partially or imperfectly interrupted at the middle; the dorsal foveæ are much more widely separated than in *Tachys*, lying nearer the base and apex and are on the fourth stria. The anterior tarsi of the male have the two small and slightly inflated basal joints angularly produced internally.

A careful examination of the large material in my collection shows that there are a considerable number of species, besides the two already recorded; on actual comparison with a European specimen of *nana* Gyll., I am convinced that it does not occur in our fauna. The nine species at present before me, including *nana*, may be known as follows:

Pronotum with an obtuse carina at each side of the base, subparallel and rather close to the lateral edge.....2

Pronotum without a lateral carina.....5

2—Prothorax narrower at base than at apex, the carinæ short and feeble. Body elongate, parallel, shining, black, the legs piceous; head two-thirds as wide as the prothorax, the eyes very moderate, slightly prominent; antennæ rather slender, piceous, slightly paler basally, but little more than half as long as the elytra, the fifth joint very nearly twice as long as wide; prothorax one-half wider than long, the sides strongly rounded anteriorly, notably oblique behind the middle, becoming deeply sinuate and then parallel and straight in about basal eighth, the right angles very sharp, the edges moderately reflexed; apex deeply and conspicuously sinuate, the base truncate; surface with minute scattered punctures, in addition to the strong reticulation, depressed, the anterior impression narrow, close to the apex, the posterior shallow and indefinite but strongly angulate medially; at each side of the base there is a shallow depression, limited externally by the short carina or fold; elytra unusually elongate, fully three-fourths longer than wide, two-fifths wider than the prothorax, gradually parabolic in about apical third, subparallel, with feebly arcuate sides and rather broadly rounded humeri; pedicel a little over a third the subbasal width; about four fine, feeble and shallow striæ can be traced, the surface unusually shining; foveæ near one and five sevenths. Length 2.8 mm.; width 1.1 mm. Wisconsin (Bayfield),—Wickham.....**angulata** n. sp.

Prothorax as wide at base as at apex or wider, the apex more shallowly sinuate; sides not so abruptly sinuate at base.....3

3—Sides of the prothorax broadly and gradually sinuate basally and evidently converging, becoming parallel before the angles, the carinæ short as in the preceding. Coloration and lustre as in the preceding, the reticulation relatively coarse and strong throughout; legs similar; head three-fifths as wide as the prothorax, the eyes decidedly small but prominent, the antennæ slender, piceous-black throughout, but little over one-half as long as the elytra, the fifth joint about twice as long as wide; prothorax fully three-fifths wider than long, rather wider at base than at apex, widest at anterior two-fifths, the sides broadly arcuate anteriorly; basal angles right and sharp; base truncate; surface as in *angulata* throughout, the median stria rather wider, shallowly impressed; elytra much broader, more oblong-oval, barely more than one-half longer than wide, scarcely two-fifths wider than the prothorax, the parallel sides much more arcuate and more broadly reflexed than in *angulata*, the humeri scarcely so broadly rounded; five shallow striæ are more or less distinctly traceable, the foveæ near one-fifth and two-thirds. Length 2.75–2.8 mm.; width 1.2 mm. Minnesota (Duluth). Two examples, taken by the writer.....**kirbyi** n. sp.

Sides of the prothorax but very feebly converging from the broad and feeble anterior arcuation and almost straight, never more than just visibly and very broadly sinuate, the hind angles sharply defined however.....4

4—Thoracic carinæ short as in the two preceding; antennæ thick; elytra without interstrial punctures. Body rather narrow and somewhat more convex, similar in color and sculpture to the two preceding; head fully three-fifths as wide as the prothorax, the eyes rather small, moderately prominent; antennæ short, about half as long as the elytra, fusco-testaceous, the fifth joint one-half longer than wide, the tenth on the flattened side but very slightly longer than wide; prothorax three-fifths wider than long, the sides strongly rounding anteriorly and inwardly to the apex, which is much narrower than the base; basal angles a little more than right; surface with the scattered punctures very minute; posterior impression indefinite, though a little stronger than in the preceding, the lateral impressions very broad and shallow; elytra fully three-fifths longer than wide, two-fifths wider than the prothorax, gradually parabolic behind, parallel, with very feebly arcuate and well reflexed sides and rather broadly rounded humeri; the three inner striæ are rather distinctly but irregularly impressed, the next two very fine to barely traceable; foveæ near basal sixth and apical fourth. Length 2.6 mm.; width 1.0 mm. Europe.....*nana Gyll.

Thoracic carinæ longer, nearly a fourth the total length of the pronotum; antennæ longer and less thickened; elytra with fine scattered interstrial punctures, somewhat less minute than those of the pronotum. Body stouter, feebly convex, more ventricose, black, the legs dark rufous, moderately shining; head three-fifths as wide as the prothorax, the eyes small but prominent; antennæ evidently more than half as long as the elytra, dark testaceous, the fifth joint nearly twice as long as wide; prothorax short, three-fourths wider than long, rounded at the sides anteriorly as in *nana*, but not so much inwardly at apex, the latter sinuate and distinctly narrower than the base; sides posteriorly very broadly and feebly sinuate, the angles right and sharp; impressions very moderate, the median stria distinct, the lateral basal impressions broad and somewhat deep, opaque; elytra one-half longer than wide, parallel, with arcuate and rather narrowly reflexed sides, fully two-fifths wider than the prothorax, very gradually ogival from but slightly behind the middle; six striæ are distinct and rather deeply impressed, the outermost feeble, the inner rather evidently but irregularly punctulate; foveæ near one-sixth and two-thirds. Length 2.5–2.7 mm.; width 1.0–1.1 mm. California (Lake Tahoe; also Humboldt and Siskiyou Cos.). Twelve examples.....**falli** Hayw.

5—Prothorax larger, more than three-fourths as wide as the elytra....6

Prothorax smaller, about three-fourths as wide as the elytra.....8

6—Antennæ short, scarcely more than half as long as the elytra. Body oblong-suboval, rather depressed and shining, though with coarse micro-reticulation, black, the legs piceous; head three-fifths as wide as the prothorax, the eyes very moderate in size, somewhat prominent; antennæ fuscous, the medial joints one-half longer than wide, the third narrower and distinctly longer than the second; prothorax three-fifths wider than long, wider at base than at the feebly sinuate apex; sides moderately rounded anteriorly, slightly oblique and

just visibly sinuate in about basal half, finely reflexed, the basal angles somewhat more than right and slightly blunt but not rounded; impressions feeble, the shallow basal foveæ at outer sixth rather narrower than usual, opaque; medial stria moderate; elytra rather more than one-half longer than wide, two-fifths wider than the prothorax, gradually parabolic in fully apical two-fifths, the sides thence parallel, well reflexed and very feebly arcuate to the broadly rounded humeri; pedicel slightly more than half as wide as the thoracic base; striæ one to four more or less evident but very shallow and somewhat irregular; foveæ near one and five sevenths. Length 2.4–2.75 mm.; width 0.95–1.15 mm. New York to North Carolina (Asheville), Illinois, Kansas, Texas (Houston), Colorado and Northern Idaho Cœur d'Alene). Abundant. [*T. picipes* Kirby]..... **inornata** Say

Antennæ decidedly longer, being evidently more than half as long as the elytra.....7

7—Form oblong-suboval, deep black, depressed, moderately shining, the elytral reticulations very strong; legs dark rufous; head nearly two-thirds as wide as the prothorax, the eyes very moderate, less convex than usual; antennæ obscure testaceous, three-fifths as long as the elytra, rather heavy, the medial joints three-fourths longer than wide, the third and fourth equal, slender, distinctly longer than the second; basal joint but one-half longer than wide; prothorax barely as wide at base as at apex, three-fifths wider than long, strongly rounded at the sides in about apical third, thence unusually strongly oblique in much more than basal half, becoming just visibly sinuate posteriorly, the angles right and sharp; impressions moderate, the stria joining them distinct; sublateral basal impressions opaque, rather deep and broadly sublinear; margins very finely reflexed; elytra one-half or more longer than wide, only about a third wider than the prothorax, the general outline nearly as in the preceding; surface with six fine and feeble striæ, slightly more distinct inwardly, all except the sutural greatly abbreviated, the foveæ as in *inornata*. Length 2.7–2.85 mm.; width 1.1–1.15 mm. Washington State.

collaris n. sp.

Form oblong-suboval, still more depressed and still less distinctly shining, black, with piceous legs; micro-reticulation strong throughout; head nearly two-thirds as wide as the prothorax, the eyes rather small but prominent; antennæ rather thick and obscure testaceous, fully three-fifths as long as the elytra, the medial joints one-half longer than wide, the fourth slightly shorter and evidently thicker than the third, which is longer than the second as usual; prothorax less abbreviated, one-half wider than long, barely as wide at base as at the feebly sinuate apex; sides less finely reflexed, rather more broadly and feebly rounded anteriorly, oblique and straight in about basal half, the angles evidently obtuse but not blunt; surface with feeble but evident transverse impressions and rather fine median stria, the opaque latero-basal impressions shallower than in *collaris;* elytra one-half longer than wide, fully two-fifths wider than the prothorax, gradually parabolic in fully apical third, the sides parallel, well reflexed, almost straight, the humeri as usual; seven striæ are

distinctly traceable, the inner four rather well impressed and distinct; foveæ as usual. Length 2.6 mm.; width 0.9 mm. Arizona (probably southern)..... **arizonica** n. sp.

8—Body oblong-oval, slightly convex, shining, with rather feebler microreticulation, black, the elytra blackish-piceous, the legs rufo-piceous; head two-thirds as wide as the prothorax, the eyes rather small and not very prominent; antennæ fusco-testaceous, moderately slender, only a little more than half as long as the elytra, the medial joints scarcely one-half longer than wide, with the third longer than either the second or fourth; prothorax one-half to three-fifths wider than long, barely perceptibly wider at base than at apex, the latter very feebly sinuate, with obtusely rounded angles; sides very finely reflexed, broadly, evenly rounded in about apical, oblique and straight in basal, half, becoming very slightly sinuate immediately at the angles, which are consequently right and subprominent, with the apex slightly blunt; transverse impressions very feeble, the stria fine; latero-basal impressions shallow, sometimes obliquely sublinear; elytra oblong, with well reflexed and slightly arcuate sides, gradually parabolic in apical third, more or less nearly one-half longer than wide and not quite one-half wider than the prothorax; about four fine and feeble striæ are detectible, the sutural evidently deeper than any other; foveæ as usual. Length 2.3–2.65 mm.; width 0.85–1.15 mm. New York (Catskill Mts.),—H. H. Smith. Two specimens. The male is notably larger and broader than the female.
debilicollis n. sp.

Body narrowly oblong, feebly convex, moderately shining, black, the legs rufo-piceous; head three-fifths as wide as the prothorax, the eyes rather small, moderately prominent; antennæ somewhat thick and short, fusco-testaceous, but little more than one-half as long as the elytra, the medial joints barely one-half longer than wide, the third distinctly longer than the second or fourth; prothorax not over one-half wider than long, the base and feebly sinuate apex equal in width; sides rather finely reflexed, rounded anteriorly, oblique and nearly straight in about basal half, becoming very slightly sinuate near the angles, which are right and sharp; transverse impressions feeble, the stria somewhat fine, the latero-basal impressions rather small and shallow; elytra about three-fifths longer than wide, three-sevenths wider than the prothorax, gradually rounded in about apical third, parallel, the sides feebly arcuate and well reflexed, the humeri somewhat less broadly rounded than in any other species; striæ about four in number, fine and feebly impressed, the foveæ as usual. Length 2.25–2.5 mm.; width 0.85–0.95 mm. California (Humboldt Co.; also Mokelumne Hill, Calaveras Co.). Five specimens..... **californica** n. sp.

The four species having an obtuse carina near the thoracic angles, differ conspicuously from the others and also among themselves. The European *nana*, which is one of these, is included for comparison. Of the remaining species, the widely distributed *inornata*,

which however does not extend its range into the Pacific coastal fauna, is distinguishable readily by its small antennæ, *collaris* by the peculiar form of the prothorax, and both this and *arizonica* differ from *inornata* in the longer and thicker antennæ. The last two species of the table are also peculiar, and especially *debilicollis*, which has an unusually ventricose form of body and piceous elytra; it also differs considerably in the sexes, as noted above; *californica* is smaller and narrower than *inornata* and has the base and apex of the prothorax more nearly equal. Mr. Bates has given *rivularis* Mots.—not Mann. as stated by the author—as a synonym of *nana*, but the descriptions certainly indicate quite a different thing, more notably in coloration, and it is probably a valid species; it occurs at Sitka, Alaska.

Tachymenis Mots.

Motschulsky included two quite different genera under his definition of *Tachymenis*, one of which had been described by Kirby under the name *Tachyta*, a genus of wide northern distribution in both hemispheres. The other generic group, which may be considered typical *Tachymenis*, since no actual type species was named by the author, includes a few remarkably distinct species, of which *flavicauda* Say may be regarded as the generic type. The special peculiarity of *Tachymenis* is the deep even groove along the sides of the pronotum, thinning the integument so that by transmitted light the edge appears testaceous; along the inner edge of the groove posteriorly there is a fine longitudinal carina, accentuating the abruptness of the gutter. Otherwise there is a considerable similitude with *Tachyta*, except that the antennæ are still shorter and moniliform, with the second and third joints equal in length but not in thickness, and that the lateral groove of the elytra is more completely and broadly interrupted submedially and more nearly obsolete. The pronotum has the same fine scattered punctures seen in *Tachyta*. The superciliary punctures bear very long setæ and are at an unusually great distance from the inner margin of the eyes, especially the smaller posterior puncture. The *Tachyta autumnalis* and *cucujoides* of Bates, from Mexico and Central America, also belong to this genus, likewise *marginicollis* Mots., which is really not different from *flavicauda* in all probability; but

the *reflexicollis* of Motschulsky, said to occur near New York City, seems to be different, having the pronotum apparently more broadly reflexed at the sides and the color testaceous. The dorsal elytral foveæ differ very much from those of *Tachyta*, being on the third interval, very close to the third stria and they are very much less widely separated, the anterior in fact but slightly before the middle.

The genus *Mioptachys* of Bates, is extremely close to *Tachymenis*, having a similar conformation of the sides of the pronotum, and it is my belief that it cannot be considered to be more than a subgeneric group of the genus, characterized by the narrow elongate form of the body and deficient elytral striation. In the following table I have described a species from Guatemala, which seems to be intermediate between the normal *flavicauda* types of the genus and *Mioptachys*, having the slender form of the latter, with more restricted striation than in *flavicauda*, though with the eyes not very small as in *Mioptachys* but well developed, even more so than in *flavicauda*.

Body oblong-oval, slightly convex, shining, piceous-black, the translucent sides of the prothorax testaceous, the elytra abruptly testaceous in almost apical half and also sometimes more nubilously at base; abdomen feebly testaceous at tip; legs pale flavo-testaceous; integuments thick, the ground sculpture a very fine but not close wavy transverse reticulation throughout; head small, scarcely three-fifths as wide as the prothorax, with two small impressions at the anterior margin of the front and an oblique ridge near each eye, the latter rather small, slightly prominent; antennæ testaceous, three-fifths as long as the elytra; prothorax slightly less than one-half wider than long, somewhat wider at base than at apex, the sides parallel and feebly, subevenly arcuate, a little straighter behind the middle, the angles slightly more than right, sharp; anterior impression subobsolete, the posterior sulciform, broadly arcuate, interrupted at the middle, the stria coarse, attaining base but not apex; elytra two-fifths to one-half longer than wide, two-fifths wider than the prothorax, oblong, obtusely rounded in apical third, the humeri broadly rounded, the seven striæ evident, rather strong inwardly, uneven or vaguely subpunctate; intervals each with a single series of widely spaced and very small micro-setigerous punctures; foveæ minute, just before the middle and near apical fifth. Length 1.7–1.75 mm.; width 0.7 mm. Atlantic to the Gulf and Lake regions and westward to the Pacific. Abundant. [*Tachymenis marginicollis* Mots.] . . . . . **flavicauda** Say

Body much narrower, shining, pale testaceous throughout above and beneath, the elytra with a very faint central cloud; ground sculpture nearly as in the preceding; head relatively larger, two-thirds as wide as the prothorax, almost as in *flavicauda* in structure and in the basal parts of the antennæ—all but three joints missing in the

type—but with notably large and rather prominent eyes, the length of which is greater than a third of the frontal width between them; prothorax one-half wider than long, about equally wide at base and apex, the parallel sides slightly rounded anteriorly, just visibly sinuate basally, the angles sharp and very feebly everted; lateral gutter deep and even throughout, the inner bounding carina half as long as the pronotum, the anterior part of the margin also rather acute though not cariniform; surface and stria nearly as in the preceding, the subbasal sulcus not medially interrupted; elytra more than one-half longer than wide, two-fifths wider than the prothorax, rounded in apical third, broadly subtruncate at apex, parallel, with slightly arcuate and rather widely reflexed sides and somewhat narrowly rounded humeri; there are two evident and feebly punctulate striæ, the others obsolete, the series of minute interstrial punctures subobsolete, barely traceable; foveæ nearly as in *flavicauda*, the anterior, however, much coarser. Length 1.65 mm.; width 0.6 mm. Guatemala (Quirigua),—Mrs. T. D. A. Cockerell.....***ocularis** n. sp.

The sutural stria in the genus becomes feebler posteriorly and does not quite attain the apex, the latter not beaded as it is in *Tachyta*, but, externally, the usual recurvature as visible in *Tachyta*, still persists and is moderately long. The extended distribution of *flavicauda* is altogether exceptional in the subfamily; the Pacific coast representatives offer no essential differential features that I can observe; individuals are extremely uniform in size throughout its range.

The following species are unknown to me in nature; possibly some of them may have been unknowingly redescribed in the foregoing pages, but of this nothing definite can be said at present:

Bembidion

acutifrons Lec.....Cal.
æneicolle Lec.....L. Sup.
ænulum Hayw.....Iowa
aratum Lec.....Gila R.
biimpressun Mann.....Alask.
blaisdelli nom. nov.....Cal.
concinnum || Blaisd.
bowditchi Lec.....Wyo.
breve Mots.....Alask.
canadense Hayw.....Ont.
carinatum Lec.....Ariz.
cautum Lec.....R. Mts.
coloradense Hayw.....Col.
complanatum Mann.....Alask.
convexulum Hayw.....B. Col.
cordatum Lec.....N. Y.
dyschirinum Lec.....Or.
falsum Blaisd.....Cal.
fortestriatum Mots.....Alask.
fraternum Lec.....Geo.
fuchsi Blaisd.....Cal.
fugax Lec.....Ill.
fuscicrus Mots.....Alask.
mixtum Lec.
glabriusculum Mann.....Alask.
grandicolle Lec.....S. D. Cal.
hageni Hayw.....Ariz.
sexpunctatum || Lec.
hamiferum Chd.....Tex.
incertum Mots.....Alask.
incrematum Lec.....Alask.
nigripes || Mann.
jucundum Horn.....Ariz.
kuprianovi Mann.....Alask.
laterimaculatum Mots.....Cal.
mächlini Hayw.....Alask.
morulum Lec.....H. B. T.

nebraskense Lec. ..... Neb.
nigrocœruleum Hayw. ..... Wash.
oberthüri Hayw. ..... R. Mts.
obscuripenne Blaisd. ..... Or.
obscuromaculatum Mots. ..... Alask.
picipes Kirby ..... Can.
pilatei Chd. ..... Tex.
plagiatum Zimm. ..... Atl.
lacunarium Zimm.
planipenne Lec. ..... L. Sup.
planum Hald. ..... Atl.
guexi Chd..
platyderum Chd. ..... N. Y.
platynoides Hayw. ..... S. Cal.
puritanum Hayw. ..... Atl.
quadrifoveolatum Mann. ..... Alask.
recticolle Lec. ..... N. M.
rickseckeri Hayw. ..... Cal.
rubiginosum Lec. ..... Colo.
simplex Lec. ..... Atl.
suspectum Blaisd. ..... Or.
vandykei Blaisd. ..... Cal.
versutum Lec. ..... Atl.
vile Lec. ..... S. D. Cal.
viridicolle Laf. ..... Tex.
whitneyi Fall. ..... Cal.
wickhami Hayw. ..... Cal.

Amerizus

oblongulus Mann. ..... Alask.
wingatei Bland. ..... Pa.

Lymneops

laticeps Lec. ..... S. D. Cal.

Tachyura

brunnicollis Mots. ..... Atl.
ferrugineus Dej. ..... Atl.
frontalis Hayw. ..... Atl.
fuscicornis Chd. ..... La.
liebecki Hayw. ..... Tex.
obesulus Lec. ..... Gila R.
ovipennis Chd. ..... Atl.

Tachyta

rivularis Mots. ..... Alask.

Tachys

albipes Lec. ..... La.
glabrella Mots. ..... Atl.
latipennis Hayw. ..... L. Cal.
marginellus Lec. ..... Col. R.
misellus Laf. ..... Tex.
mordax Lec. ..... Col. R.
oopterus Chd. ..... La.
pallidus Chd. ..... Tex.
reflexicollis Mots. ..... N. Y.
sequax Lec. ..... R. Mts.
testaceolimbata Mots. ..... Atl.
trechiformis Hayw. ..... Ariz.
virgo Lec. ..... S. D. Cal.

Bibliographic references and adequate descriptions of most of these species are given in the two papers of Mr. Hayward, referred to at the beginning of this work, but I have not always followed the synonymy given by that author and only the original localities are cited above in most cases, because of the composite nature of the material associated by Mr. Hayward under his conception of specific scope.

II—STUDIES AMONG SOME OF THE AMERICAN AMARINÆ AND PTEROSTICHINÆ

The genus *Amara*, in its comprehensive sense, was held to be merely a member of the Pterostichinæ by G. H. Horn, but many systematists believe that, because of certain habital differences and some peculiarities of palpal structure—not however without numerous exceptions—the genera allied to *Amara* should be considered separately from the true Pterostichinæ and I agree with Mr. Bates in so regarding them.

Subfamily AMARINÆ

The small or moderate, oval or oblong species composing this subfamily are very numerous, though much less so than those of the Bembidiinæ previously described in this volume, and they are more difficult, or perhaps unsatisfactory from a taxonomic standpoint, owing to a more obvious deficiency in structural peculiarities. They form a fairly isolated group, more closely related to the Pterostichinæ than to any other of the larger subfamilies, though easily distinguishable as a rule by certain habital features and, as noted by Bates, by the relatively more elongate and more setose penultimate joint of the labial palpi, a special character first observed by G. H. Horn, but apparently not utilized by him systematically. As in the case of so many other Carabid groups, the species are peculiarly northern in habitat; they have been treated systematically by LeConte (Proc. Ac. Phila., 1855, 7, p. 346), Horn—*Triæna* and *Celia*—(Tr. Am. Ent. Soc., XIX, 1892, p. 18) and Hayward (l. c., XXXIV, 1908, p. 13).

In some large sections of our Amarinæ the species have scarcely been touched from a descriptive viewpoint, so that there is almost a virgin field for this form of research. It is primarily for this reason that the number of legitimate taxonomic forms which I have been forced to recognize and describe, seems incredibly large, especially in the genus *Celia*. This very large proportion of new descriptions is not by any means chiefly owing to the undiscrimi-

nating methods of certain earlier authors, although this was largely contributive, but is principally due to very extensive fresh material which has been rendered available through the kindness of many friends, and particularly Mr. John D. Sherman, Jr., who secured remarkable series of many species in the almost inexhaustible regions about Lake Superior. Messrs. Shoemaker and Schott of New York, Prof. Wickham and others, have also aided materially. The Levette collection furnished a large and varied assortment of western species and a goodly number were captured by myself from time to time.

I do not think there can be very serious doubt that the groups of the subfamily defined and named by Zimmermann, should be considered distinct genera and not in the nature of subgenera, for each is characterized by its own peculiarities of facies, which become more and more apparent through prolonged observation and comparative study, and I therefore advocate their retention as valid genera. These genera, so far at least as our own fauna is concerned, may be outlined in few words as follows:

Terminal spur of the anterior tibiæ simple 2
Terminal spur trifid equally in both sexes; posterior male tibiæ pubescent within 12
2—Prosternal process unmargined, not setose; prothorax widest before the base; hind tibiæ not pubescent internally in the male 3
Prosternal process margined 7
3—Body elongate, somewhat as in *Pterostichus* 4
Body shorter and stouter; middle tibiæ not internally dentate in the male 6
4—Antennæ thickest medially, tapering thence to base and apex; tarsi thick; thoracic base transverse and straight; middle male tibiæ not or but vestigially dentate within; body less slender; habitat southern . . . . . **Feronalius**
Antennæ filiform; body much more slender 5
5—Antennæ and tarsi slender; frontal sulci short, never prolonged upon the epistoma; thoracic base sinuate—either throughout or laterally; middle male tibiæ grooved or flattened internally and bi- or tridentate on the inner edge distally; habitat arctic or subarctic . . . **Curtonotus**
Antennæ notably thick, gradually flattened distally as usual, the tarsi thicker than in *Curtonotus;* frontal sulci long, deep, sometimes invading the epistoma; thoracic base not sinuate, rounded laterally; middle male tibiæ obsoletely bisinuate within; habitat as in the preceding . . . . . **Stereocerus**
6—Frontal sulci small; last palpal joint more swollen than usual, acuminate distally; thoracic base truncate, becoming oblique laterally;

elytra with fine impunctate striæ, the scutellar obsolete; body oblong, small in size.....**Leironotus**

7—Prothorax decidedly wider before the base somewhat as in the preceding genera.....8

Prothorax widest at base as a rule, though sometimes very feebly inflated and in such cases slightly wider submedially than at base.....9

8—Posterior male tibiæ not pubescent within; body stout, oblong. **Leiocnemis**

Posterior male tibiæ pubescent within; mentum tooth truncate and trapezoidal to bilobed; body slender to stout; thoracic sides sinuate to rounded basally as in *Curtonotus*.....**Bradytus**

9—Posterior male tibiæ without internal pubescence.....10

Posterior male tibiæ pubescent within.....11

10—Prosternal process having numerous bristling setæ; body larger. **Percosia**

Prosternal process without more than two setæ; body smaller, often with thinner integument.....**Celia**

11—Body elongate-oval, always with dense integument.....**Amara**

12—Body as in *Amara*, though usually smaller or relatively narrower and more elongate, the male tibiæ as in that genus.....**Triæna**

Two of the species hitherto placed in *Curtonotus*, differ so greatly from typical forms of the latter as seemingly to warrant generic separation under the names above suggested for *Curtonotus pterostichinus*—or *putzeysi*—and *hæmatopus*. The characters given for *Leironotus* Gangl., are taken from the work of Mr. Hayward, as I have no representative of the species *Amara arenaria* at hand, and therefore can consider it no further for the present. I have also omitted *Acrodon* Zimm., for similar reasons; it is founded upon *A. brunnea* Gyll., of northern Europe, said to occur also in Alaska; a species from Colorado in my collection, which may have been confounded with it, has a trapezoidal sinuato-truncate mentum tooth; it is said to be acute in *Acrodon brunneum*. The form of the mentum tooth varies a good deal in nearly all the groups of Amarinæ and is an uncertain element in the estimation of genera. In *Curtonotus*, for example, it is normally small, short and bilobed, but in *fulvipes* and *carinatus* it is short, very broadly trapezoidal and with truncate apex; so also in *Bradytus*, we have the usually bilobed form, or the trapezoidal and narrowly truncate development seen in *apricarius*.

Feronalius n. gen.

The species named *pterostichinus* by Hayward, forming the type of this genus, and of which a male from Fort Wingate, New Mexico,

lies before me, so closely resembles *putzeysi* Bates, from Mexico, that I am altogether uncertain as to its validity. In addition to the characters given above, the very large head and deeply and almost wholly strigose mandibles are important from a generic viewpoint; the deep strigæ are obsolete for a greater distance basally on the right than on the left mandible. The scutellum extends posteriorly between the elytra much less markedly than in *Curtonotus*. The mentum tooth is strongly bidentate. The form and sculpture of the pronotum and elytra are virtually as in *Curtonotus*.

Curtonotus Steph.

Cyrtonotus Auct.

Removing the two aberrant species *pterostichinus* and *hæmatopus* as above, this rather large and well known genus becomes fairly homogeneous, the chief diversification being in the form of the thoracic sides basally; there is usually a deep sinus just before the angles, though in the *brunnipennis* section, the sides are rounded to the basal angles, but with the lateral parts of the base nevertheless remaining distinctly sinuate. A large proportion of the extreme northern species are unknown to me in nature, and so at this time I will simply make known a few nondescript species, which can readily be interpolated in the very satisfactory table drawn up by Mr. Hayward. If *Curtonotus* is to be maintained as a distinct genus, the name *fulvipes* Putz., will have to be restored, in place of *pennsylvanicus* Hayw. This species is aberrant in outline, almost exactly resembling *Bradytus exaratus* Dej., which, with a few allied species, forms an equally aberrant element in *Bradytus*, and, as further proving the close relationship of *Curtonotus* and *Bradytus*, it should be said that wholly similar differences in the form of the thoracic sides toward base, as related of the former, exist also in the latter genus; this can be observed in comparing, for example, *apricarius* with *septentrionalis*.

On reading the description of *Curtonotus adstrictus* given by Putzeys, I am unable to differentiate it from *laticollis* Lec., and believe the two to be identical. It is probable that the species described below under the name *spadiceus*, is among those identified as *adstrictus* by Hayward, but the Putzeys description does not fit it very well, especially in the width of the elytra, which in *adstrictus*

are said to be perceptibly wider than the prothorax; in *spadiceus* it is seldom that the elytra become perceptibly wider than the prothorax, and the proportion of width to length of the body given for *adstrictus*—5.7 to 13 mm.—is even greater than in any example of *laticollis* at hand, showing that *adstrictus* is very much stouter than the notably narrow and parallel *spadiceus* or *tartareus*.

It is to be regretted that the philologically defective name *Curtonotus* has to be retained, rather than the substitute *Cyrtonotus* of more recent authors, but on the principle that generic symbols should not be changed in any way if it can possibly be avoided, it it necessary to employ it in place of the latter.

Curtonotus sponsor n. sp.—Narrow and elongate, moderately convex, black, shining, the under surface and legs brownish-rufous; head fully two-thirds as wide as the prothorax, with unusually large, prominent eyes; antennæ ferruginous, fully as long as the head and prothorax, the latter two-fifths wider than long, rather evidently wider at apex than at base, the apical angles broadly rounded; sides strongly rounded, becoming parallel and straight for some distance before the basal angles, which are very acute; median stria not attaining the apex; surface only minutely and obsoletely punctulate apically, the concavity within the long strong basal carinæ coarsely punctate and having a small, longitudinal anterior impression at some distance from the carina; side margins finely reflexed throughout; elytra two-thirds longer than wide, a fifth wider than the prothorax, parallel, with feebly arcuate sides; striæ fine but well impressed, the punctures fine, sometimes scarcely observable, the lateral series of ocellate punctures moderately interrupted; subapical sinus rather strong. Length (♂) 11.0–11.5 mm.; width 3.8–4.1 mm. California (Siskiyou Co.). Three examples.

Resembles *jacobinus*, which I have from San Diego to Alameda, but smaller, narrower and with longer antennæ than in the male of that species, less transverse prothorax, which is also punctured apically, and with more obtusely rounded apical angles, very much finer punctures of the finer elytral striæ and less widely interrupted series of the eighth. It does not seem to resemble *stupidus* Lec., from Sacramento, very closely, according to the description.

Curtonotus concretus n. sp.—Elongate, convex, subventricose, shining, black; under surface piceous, the legs dark rufous; head two-thirds as wide as the prothorax, the eyes well developed, prominent; anterior strioles narrow, deep; antennæ ferruginous, a third longer than the head; prothorax two-fifths wider than long; apex sinuate, with broadly rounded angles and distinctly wider than the base; sides broadly rounded, gradually sinuate basally, where they do not become parallel, the angles acute; surface impunctate anteriorly; basal foveæ and carinæ nearly as

in *jacobinus*, but much less coarsely punctate, the median stria similar; elytra unusually inflated, though three-fifths longer than wide, a third wider than the prothorax, the eighth stria as in *jacobinus*, the subapical sinus deeper; striæ more deeply impressed, coarsely punctate and crenate anteriorly; the scutellar long, coarsely punctate. Length (♀) 12.0 mm.; width 4.8 mm. California (a single female from the Levette collection, without more definite indication of locality).

This species, while associable rather closely with *jacobinus*, differs in its relatively smaller and much less transverse prothorax, without trace of anterior punctures and with less parallel sides at base, and also in its more inflated elytra, with coarser crenating strial punctures and deeper subapical sinus.

Curtonotus spadiceus n. sp.—Outline narrow, subparallel and elongate, rather shining, piceous-black to slightly paler; head barely three-fifths as wide as the prothorax, with moderate eyes and narrow suboblique anterior strioles; antennæ ferruginous, nearly as long as the head and prothorax (♂), shorter (♀); prothorax two-fifths to one-half wider than long, the sinuate apex equal in width to the base and with moderately blunt angles; sides rounded, sinuate and parallel to diverging at base, much more broadly reflexed than in the two preceding and punctulate along the gutter; surface with fine scattered punctures anteriorly, the latero-basal impressions large, shallow, punctate and single, the carina long and strong; punctures extending across the middle as usual, the median stria abbreviated at apex but not at base; elytra fully three-fourths longer than wide, not or just perceptibly wider than the prothorax, the lateral series broadly interrupted; subapical sinus rather deep (♂), or broader and shallow (♀); striæ moderate and with moderate punctures anteriorly, the intervals nearly flat except apically. Length (♂ ♀) 11.0–13.0 mm.; width 4.0–4.6 mm. New Mexico (Jemez Springs, Las Vegas and Fort Wingate). Eleven specimens.

Related to *laticollis* but much narrower and with less transverse prothorax. In some examples the thoracic foveæ are very obsoletely subdivided longitudinally but never so evidently as in *laticollis*, and their punctures are less coarse.

Curtonotus tartareus n. sp.—Form elongate, narrow and parallel, strongly shining, black, the under surface blackish-piceous; legs obscure rufous; head three-fifths as wide as the prothorax, with only very moderately convex eyes, the strioles rather fine, parallel; antennæ dark ferruginous, long and somewhat slender, not quite as long as the head and prothorax, the latter but slightly transverse, even less than a third wider than long, the sinuate apex with broadly obtuse angles and equal in width to the base; sides but moderately reflexed, punctulate, broadly rounded, becoming rapidly sinuate and parallel for a short distance before the very acute angles; surface impunctate anteriorly, the impressions and carinæ nearly as in *laticollis* but much more finely punctate;

elytra equal in width to the prothorax, three-fourths longer than wide, subinflated and wider behind the middle than at base; lateral series widely interrupted, the subapical sinus moderately deep; striæ rather deeply impressed though fine, not very coarsely punctate, the intervals feebly convex except laterally, strongly convex on the apical declivity. Length (♂) 12.0 mm.; width 4.5 mm. A single example, probably taken in Colorado by Levette.

This distinct species belongs to the *laticollis* section, but differs greatly in its narrower and more parallel form, much less transverse prothorax and in many other characters. From *spadiceus* it differs in the shorter and more abruptly formed basal sinus of the thoracic sides, relatively longer and less transverse prothorax, which is also less reflexed at the sides, in its still longer male antennæ and in the still broader anterior male tarsi.

Curtonotus catenulatus n. sp.—Oblong, parallel, only moderately convex, deep black and polished, with the elytra bluish-black; under surface black, with the legs pale ferruginous; head fully three-fifths as wide as the prothorax, the eyes prominent, the strioles fine, parallel; antennæ pale ferruginous, long, almost equaling the head and prothorax, the latter one-half wider than long, the sinuate apex with broadly obtuse angles and not quite as wide as the base; sides broadly and evenly rounded almost to the base, becoming very briefly sinuate at the angles, which are slightly acute and very sharp; margins abruptly and strongly reflexed, feebly punctulate; surface with a few fine scattered punctures apically, the basal foveæ large, deep, feebly divided and with moderate punctures extending entirely across as usual; median stria subentire, the carinæ strong and rather narrow; elytra equal in width to the prothorax, three-fifths longer than wide, parallel, with feebly arcuate sides; striæ rather fine but deep, with the punctures relatively coarse and much wider than the striæ, distinct to the apical declivity; lateral series moderately interrupted, the subapical sinus rather broad and shallow; intervals nearly flat except at apex. Length (♂) 10.3 mm.; width 3.8 mm. Montana (Billings),—Shantz.

This species is evidently allied to *infaustus* Lec., but has the elytra blue-black, with a very long scutellar stria—said to be moderate in *infaustus* by Hayward; the two basal joints of the hind tarsi have each a very faint external stria, only traceable toward base. There are some coarse punctures at the sides of the metasternum and on the met-episterna; the latero-basal parts of the abdomen are finely punctate. The transverse thoracic impressions are said by Mr. Hayward to be obsolete in *infaustus*, they are very evident in the present species.

The two following species received from Mr. Sherman a few years

ago are hitherto undescribed and the present opportunity is taken to define them:

Curtonotus labradorensis n. sp—Body elongate, parallel, black, moderately shining, not at all metallic, the elytra sometimes brownish; legs piceo-rufous; head well developed, with prominent eyes and deep linear strioles; antennæ (♂) as long as the head and prothorax, ferruginous; prothorax two-fifths wider than long, the apex sinuate and with broadly rounded angles, subequal to the base in width, widest at the middle, the sides evenly rounded, becoming sinuate and subparallel for some distance before the angles, which are slightly more than right though sharp; foveal region coarsely punctate, the punctures fine and obsolescent apically and also medio-basally; foveæ rather long, linear, never wholly confluent, the carinæ short and obtuse; elytra nearly two-thirds longer than wide, not (♂) or quite evidently (♀) wider than the prothorax, the striæ moderately coarse to finer or less impressed, always distinctly punctate, the lateral series very widely interrupted; surface (♀) slightly alutaceous. Length (♂ ♀) 9.8–10.8 mm.; width 3.65–4.0 mm. Labrador (W. St. Modest). Eight examples.

There is some variation in the degree of impression of the elytral striæ, flatness of the intervals, coarseness of the punctures and length of the scutellar stria. The middle tibiæ of the male are very broadly swollen on the inner posterior side, the two subapical denticles on the inner side small. The species may be placed near *hudsonicus* Hayw., but it is larger in size and not in the least metallic. The basal joints of the hind tarsi are grooved externally.

Curtonotus scrutatus n. sp.—Elongate, rather more convex and smaller, shining, black to piceous-brown, the legs piceous or paler; head smaller than in the preceding but otherwise nearly similar, the eyes rather large and prominent; prothorax nearly similar, the foveæ rather longer and still more linear; elytra nearly similar in outline, striation and punctuation but more convex and, in the male, distinctly wider than the prothorax. Length (♂) 9.0–9.5 mm.; width 3.2–3.35 mm. Labrador (W. St. Modest). Two examples.

This species while allied rather closely to *labradorensis*, differs in its narrower form, more convex surface, smaller head and especially in the conformation of the middle tibiæ of the male, which, from a posterior viewpoint, are not very broadly swollen within but more slender and only very obtusely thickened just below the middle; the tooth itself is more prominent and acute however; it may be placed next to *labradorensis*.

There are numerous species allied to *brunnipennis* Dej., from the more southern localities of the continent; those at hand may be differentiated among themselves as follows:

Elytra dark brown in color. Body larger, rather stout, black, moderately shining, the elytra alutaceous in the female; under surface black, the legs rufo-piceous; head two-thirds as wide as he prothorax, the strioles large, elongate and broadly impressed; antennæ piceous, the basal joint rufous; prothorax a little less than one-half wider than long, as wide at base as at the deeply sinuate apex, widest at about the middle, with evenly arcuate sides from apex to base; margins rather broadly reflexed and punctulate; foveæ strongly punctate, feebly half divided, the carinæ strong; elytra one-half longer than wide, barely visibly wider than the prothorax, the striæ moderate and with distinct punctures, the broad intervals nearly flat, not more convex at apex. Length (♀) 10.5 mm.; width 4.2 mm. Labrador (Nain).....**brunnipennis** Dej.

Elytra rather bright rufous. Body smaller and distinctly more slender, moderately shining, the elytra dullish, deep black, the legs virtually black; head three-fifths or more as wide as the prothorax, the strioles small, fine; antennæ blackish, the two basal joints paler; prothorax two-fifths to one-half wider than long, widest distinctly before the middle, the sides similarly subevenly rounded to the base but much more finely reflexed and less punctate; apex sinuate, with broadly rounded angles; surface impunctate anteriorly, the foveæ smaller than in *brunnipennis*, coarsely punctate, the inner barely traceable; carinæ shorter and more obtusely convex; elytra two-thirds longer than wide, a fifth or sixth wider than the prothorax, ogivally rounded from slightly behind the middle, the striæ fine and very finely punctulate; intervals nearly flat; lateral series of ocellate punctures extremely widely interrupted. Length (♂♀) 7.8–9.5 mm.; width 2.75–3.75 mm. Colorado. Eleven examples.....**rubripennis** n. sp.

Elytra not paler; upper surface uniform in color throughout.....2

2—Thoracic foveæ small, only slightly elongate and completely isolated, having but few punctures. Body rather elongate, only moderately convex, blackish-brown and moderately shining, the under surface and legs rufo-piceous; head two-thirds as wide as the prothorax, with notably prominent eyes and small fine strioles; antennæ piceous, the one or two basal joints rufescent, moderate in length, stout, with rather short joints; prothorax two-fifths wider than long, widest before the middle, the rather finely reflexed sides as in the preceding; apex shallowly sinuate but with less broadly obtuse angles; elytra three-fifths longer than wide, a fifth or sixth wider than the prothorax, parallel, with feebly arcuate sides; striæ fine and more or less finely punctate. Length (♀) 8.0–9.5 mm.; width 3.0–3.5 mm. New Hampshire (summit of Mt. Washington). Two examples.
deficiens n. sp.

Thoracic foveæ larger and closely punctate, either wholly coalescent or feebly divided.....3

3—Body narrow and very elongate, notably convex, deep black above and beneath, the legs obscure rufous; surface moderately shining; head two-thirds as wide as the prothorax, with prominent eyes and small fine strioles; antennæ fusco-ferruginous throughout, the joints much more elongate than in *deficiens*, the medial on the edge fully

twice as long as wide; prothorax feebly transverse, a fourth to third wider than long, with very evenly rounded, finely but strongly reflexed sides, widest barely before the middle; apex equal in width to the base as in the others of this section, feebly sinuate, with obtusely rounded angles; foveæ large, rather deep, coarsely punctate and completely coalescent as a rule, the carinæ short but distinct, moderately elevated; elytra elongate, fully three-fourths longer than wide, never more than barely visibly wider than the prothorax, very gradually ogivally rounded behind, the sides parallel and arcuate; striæ rather fine but impressed and conspicuous, finely punctate; intervals feebly convex. Length (♂♀) 8.5–9.2 mm.; width 3.2–3.4 mm. New Hampshire (Mt. Washington). Five examples.....**argutus** n. sp.

Body somewhat as in *argutus* but shorter and less convex, rather shining, similar in coloration; head similar and with very prominent eyes, the strioles short, rather more punctiform; antennæ almost similar; prothorax much shorter and more transverse, though not quite one-half wider than long, otherwise nearly as in *deficiens*, except that the sides become oblique and subsinuate toward base, and the foveæ are more completely divided and with fewer punctures; elytra shorter and not quite so convex, three-fifths longer than wide, evidently wider than the prothorax; striæ and punctures nearly similar. Length (♀) 8.4 mm.; width 3.0 mm. New Hampshire (summit of Mt. Washington). One specimen.....**inanis** n. sp.

Most of these forms seem to have been under observation by Mr. Hayward, but were not definitely characterized; it is rather singular that three of them should be found within the narrow confines of the White Mts., of New Hampshire, but I am unable, under present evidence, to consider them specifically identical, or in some cases as even closely related. One of them may have possibly been identified by LeConte as *hyperborea* Dej., but in such case not correctly.

Stereocerus Kirby

My four examples of the remarkably isolated *hæmatopus* Dej., forming the type of this genus, are all females, and I have drawn the male characters stated in the above table of genera from the work of Mr. Hayward. There is a distinct habital difference between *hæmatopus* and *Curtonotus* proper, so far at least as concerns the American fauna, and I have but little doubt of the necessity for generic separation. These habital peculiarities relate especially to the more ventricose form of the body and to the shining metallic lustre. The structural features enumerated above seem, in conjunction with the habital differences, to be decisive. The exam-

ples in my cabinet were taken at West St. Modest, Labrador, by Mr. Sherman.

Leiocnemis Zimm.

The typical American species of this genus is the well known *Zabrus avidus* of Say, subsequently placed in the genus *Pelor*, of Bonelli, and still later described by Dejean as *Amara confinis*. It has somewhat the aspect of a *Bradytus* of the *exaratus* type, though with much shorter prothorax, which is also much more sinuate at the sides basally—even more so than in *Bradytus apricarius*. The absence of pubescence on the inner side of the posterior male tibiæ is not a positive bar to its assignment to *Bradytus*, as this feature is extremely variable in that genus, and, in *Bradytus æqualis*, there is no more vestige of such pubescence than in *Leiocnemis avida*. *Leiocnemis* can however be maintained as distinct from *Bradytus* on other grounds. The margination of the prosternal lobe, for example, is extremely feebly defined, and in some examples exists hardly more than in *Curtonotus;* then again, the pronotal sides are rather broadly reflexed, a condition present in no *Bradytus* known to me. The mentum tooth in *avida* is short, broad and trapeziform, the apex not even evidently sinuate. The male prosternum has a small and unimpressed area of very fine punctures, as in many species of *Celia*, as well as *Bradytus*. The species is rather abundant from Nova Scotia to Colorado.

Bradytus Zimm.

Although without much doubt valid as a genus, *Bradytus* is even less consistent in uniformity of characters usually relied upon in defining genera, than any other of the Amarinæ. The mentum tooth varies from narrowly triangular, with truncate apex, as in *apricarius*, to an extremely broad, short and widely trapeziform shape, as in *exaratus*, or either sinuato-truncate or bilobed, as in most of the species. The male has a small oval punctured prosternal area in the majority of species, but in *nainensis* and probably also in *glacialis* this is much modified, and in *immundus* it is wanting. Usually the scutellar stria is without attendant anterior fovea, but in *immundus* this is present; this character is, however, inconstant also in *Amara* and *Triæna*. The most persistent, and in fact the only decisive generic characters, are the submedially

widest prothorax and the pubescent inner surface of the posterior male tibiæ, the latter a character reproduced exactly however in *Amara* and *Triæna*.

In regard to the general form and habitus of the body, there are four subgeneric groups as follows:

Body very stout and convex, oblong-oval, with notably coarse and deeply impressed striæ and very convex intervals.....I (*exaratus*)
Body less stout, with finer and less impressed striæ, the intervals flat or but slightly convex.....2
2—Body narrow and elongate, the sides of the prothorax distinctly sinuate at base.....II (*apricarius*)
Body less narrow to somewhat stout, the sides of the prothorax never distinctly sinuate at base.....3
3—Prothorax relatively very short, with the sides oblique and nearly straight in about basal half, the carinæ obsolete; prosternum of the male with a large medial unimpressed area of diffused punctures; colors metallic.....III (*nainensis*)
Prothorax longer, the sides subevenly arcuate from apex to base, the carinæ usually distinct; prosternum with an elongate-oval and subimpressed punctured area in the male, wanting in *immundus;* colors never metallic.....IV (*latior*)

As may be seen these groups are based chiefly upon habitus, but this is so marked as to identify the various groups at first sight. The species are not numerous and those at hand may easily be recognized as follows:

Group I

The punctate prosternal area of the male is not impressed, though well defined, and in that sex the anterior tarsi are but feebly dilated, contrasting greatly with the broad dilatation in *Curtonotus;* the dilated joints have each a small quadrate subapical pale membranous lamina beneath. The inner side of the posterior male tibiæ has but very few stiff hairs, sometimes scarcely discoverable. We have several species as follows:

Body larger, very stout. Oblong-oval, very convex, piceous-black, the legs obscure rufous; upper surface highly polished throughout in both sexes; head three-fifths as wide as the prothorax, the eyes large but not very prominent, the strioles fine and short; antennæ slender, obscure ferruginous, not extending to the thoracic base; prothorax barely one-half wider than long, subparallel, widest at the middle; apex sinuate, narrower than the base, with bluntly rounded angles; base transverse, feebly sinuate at each side; sides broadly and subevenly arcuate, becoming gradually feebly sinuate toward the hind

angles, which are minutely sharp and prominent; transverse impressions distinct, the anterior not punctate; foveæ large, two at each side, punctate, the carinæ short but strong; margins not widely but abruptly reflexed; elytra a fourth longer than wide, barely at all wider than the prothorax, obtusely rounded in apical two-fifths, the coarse and deeply impressed striæ strongly punctate, the intervals very convex; scutellar stria wanting, represented by about two isolated punctures. Length (♀) 10.0 mm.; width 4.7 mm. Kansas (Douglas Co.),—Dyche. . . . . **gravidus** n. sp.

Body smaller, not so stout; scutellar stria generally evident though very short. 2

2—Punctured area of the male prosternum broadly oval and feebly impressed; body shorter, the elytra barely more than twice as long as the prothorax. Lustre and coloration nearly as in the preceding; head nearly similar, but with rather more prominent eyes, the slender antennæ pale ferruginous, extending to the thoracic base (♂) or a little shorter (♀); prothorax nearly similar but shorter, fully one-half wider than long, more strongly arcuate at the sides, the latter however not becoming sinuate basally, except just visibly at the angles, which are acute because of the greater sinuation at the sides of the base; surface similar; elytra scarcely a fourth longer than wide, not at all wider than the prothorax, very obtuse at tip but more angulate toward the suture, the subapical sinus small and feeble as usual in this section; striation similar; interrupted punctures of the eighth stria more on and less to the outer side of the stria than in *gravidus*. Length (♂♀) 7.3–7.5 mm.; width 3.3–3.4 mm. Missouri (St. Louis). Two examples taken by the writer. . **curtus** n. sp.

Punctured area of the male prosternum very narrow and elongate; elytra longer, distinctly more than twice as long as the prothorax . . . 3

3—Body broader, very convex, polished, piceous-black to ferruginous in color as usual, the under surface more piceous, the abdomen rufescent; legs dark rufous; head as in the two preceding; antennæ nearly similar, ferruginous; prothorax only two-fifths wider than long or less, the sinuate apex with rounded angles, slightly narrower than the base; sides abruptly evenly reflexed and evenly rounded from apex to base, the angles slightly more than right but very sharp, not prominent; transverse impressions feeble; surface almost completely impunctate, the two foveæ at each side of the base widely separated, isolated and having each a few coarse punctures, the outer fovea much the shorter, the carinæ very short, obtuse; elytra fully two-fifths longer than wide and always distinctly wider than the prothorax in both sexes, obtusely ogival in apical third; lateral series widely interrupted; striæ less coarse or deeply impressed than in the two preceding, the intervals less convex; scutellar stria short, disintegrated as a rule. Length (♂♀) 7.8–9.0 mm.; width 3.3–4.1 mm. New York (Long Island) and North Carolina (Asheville) to Kansas. Abundant. [*Amara furtiva* Say]. . . . . **exaratus** Dej.

Body slightly smaller, narrower and more parallel, deep black above, more piceous-black beneath, the legs osbcure rufous; head and antennæ nearly similar, the strioles deep, oblique; prothorax similar,

except that the margins are more finely reflexed and the surface near the foveæ with finer and more numerous diffused punctures, the foveæ much feebler, more linear, the inner long, the outer very short, the carinæ extremely short and rather feeble; elytra a third longer than wide and barely visibly wider than the prothorax, almost as in *exaratus* throughout, except that the striæ are relatively rather coarser, more deeply impressed and somewhat more coarsely punctate. Length (♂) 8.0 mm.; width 3.4 mm. Pennsylvania.
stygialis n. sp.

The species described by Say under the name *Amara furtiva* was considered distinct from *exaratus* by LeConte, but I am inclined to agree with Hayward that is it merely founded upon pale examples of that species; it is impossible, at least, to gain any further information from the original description. It is possible of course that *furtivus* may prove to be valid, as there are apparently a number of distinct species in this group of the genus, as indicated above. The convex apical marginal beading of the epistoma is more developed in this group than in the others.

Group II

But one species assignable to this group, very widely diffused and mundane, has occurred thus far in our fauna. The male has a small unimpressed oval prosternal area, which is very coarsely and irregularly punctate; the anterior tarsi are only feebly dilated and the terminal laminæ beneath are thick and not membranous; the inner side of the hind tibiæ is flat and abundantly clothed with suberect stiff hairs:

Form elongate, convex, polished, black, the under surface piceous, with rufous abdomen and legs; elytra but feebly alutaceous in the female, though micro-reticulate; head two-thirds as wide as the prothorax, with prominent eyes and very short fine oblique strioles; antennæ ferruginous, extending slightly behind the thoracic base; prothorax widest at the middle, less than one-half wider than long, the apex feebly sinuate, with distinct and but slightly blunt angles, not quite as wide as the base, which is transverse, feebly arcuate medially; sides finely but strongly, evenly reflexed, moderately arcuate, becoming gradually rather feebly sinuate basally, the angles right, with minutely prominent tip; surface impunctate except basally, the foveæ large, shallow, coalescent and coarsely punctate, the carinæ strong, moderately long; elytra one-half longer than wide, evidently wider than the prothorax, with feebly arcuate sides; striæ rather coarse, impressed, strongly punctate to behind the middle, the scutellar moderately long, the lateral series but moderately interrupted;

subapical sinus small and feeble; intervals feebly convex. Length (♂♀) 6.7–7.7 mm.; width 2.7–2.9 mm. Rhode Island to Lake Champlain and Lake Superior (Marquette and Duluth), also in Europe and Siberia. Abundant.....**apricarius** Payk.

The metasternal punctures vary greatly in number, rarely becoming very close laterally.

Group III

There is also but a single species in this group known to me; *glacialis* Mann., may however also be associated with it, although Mr. Hayward states, presumably after observation of one of the Kenai, Alaska, examples in the LeConte collection, that the male prosternum in *glacialis* has no punctured area. There are also many other specific differences, judging by the Hayward description. In *nainensis* the male has the diffused medial punctures of the prosternum small, the anterior tarsi very moderately dilated, each joint with two or three small erect lamellæ beneath, and the inner side of the hind tibiæ has a very elongate area of not very dense, long, stiff suberect hairs; the outer side of the first hind tarsal joint is very faintly grooved, the second simple; it may be described as follows:

Body rather stout, oblong-suboval, moderately convex, somewhat ventricose, shining and æneous in both sexes, the elytra faintly microreticulate (♂) or strongly so (♀); under surface black, the legs black, the femora rufescent; head large, fully two-thirds as wide as the prothorax; eyes prominent, the strioles coarsely foveiform (♂) or fine and linear (♀); antennæ slender, longer than the head and prothorax, deep black throughout; prothorax two-thirds wider than long, the apex feebly sinuate and with bluntly rounded angles and slightly narrower than the base, which is subarcuate medially; disk widest slightly before the middle, the sides finely but strongly reflexed, arcuate, becoming oblique and faintly subsinuate posteriorly, the angles much more than right, not rounded; surface smooth, with scattered moderate punctures near the sides and sometimes latero-apically, also finely medio-basally; foveæ rather large, subconfluent and coarsely punctate (♂), or smaller, more isolated and with but few finer punctures (♀); carinæ wholly wanting; elytra fully one-half longer than wide, a third to fourth wider than the prothorax, parallel, with arcuate sides, gradually ogival in apical two-fifths; striæ moderate, evidently though not coarsely punctate, the scutellar very moderate, the lateral series widely interrupted; intervals flat, barely convex on the declivity, the sinus moderate, shallow; punctures of the under surface variable. Length (♂♀) 6.25–6.65 mm.; width 2.75–2.8 mm. Labrador (Nain),—Sherman.
nainensis n. sp.

The species *glacialis* Mann., was described originally from a single specimen taken under a stone on the Kenai Peninsula of Alaska, and, as represented by LeConte's Kenai examples, described by Hayward, it differs from *nainensis* in its paler basal antennal joint, in its obsolete and not distinct transverse pronotal impressions, in the subacute and slightly prominent basal thoracic angles, in its long scutellar stria and in having the two basal joints of the hind tarsi grooved externally; its length is given as 6.25–8 mm. The species described by Putzeys as *glacialis*, from a specimen in the Chaudoir collection, is evidently a different thing; it was considered a *Curtonotus* by that author.

Group IV

The species of this group are numerous and are rather homogeneous. As shown in *latior*, the male prosternum has an elongate flattened area of moderate punctures, the anterior tarsi moderately dilated, each joint with a relatively very small narrow apical lamina, the coarse hairs within the hind tibiæ rather few in number and inconspicuous and the slender hind tarsi without external grooves. As usual, there are two apical setigerous abdominal punctures in the male and four in the female. Our species are the following so far as known:

Scutellar stria without an ocellate puncture 2
Scutellar stria with a small but distinct ocellate puncture; body small . . 7
2—Body narrow and elongate. Shining and black above and beneath, the legs obscure rufous, the anterior tarsi (♂) pale ferruginous; surface convex; elytra (♀) but slightly less shining; head two-thirds as wide as the prothorax, with very prominent eyes and fine strioles; antennæ obscure ferruginous, slender, as long as the head and prothorax, the latter widest at the middle, two-fifths (♂) to one-half (♀) wider than long, the apex deeply sinuate, with prominent blunt angles, much narrower than the base, which is transverse; sides rather finely but strongly reflexed, evenly arcuate from apex to base, the hind angles nearly right, sometimes feebly prominent; surface smooth and punctureless, excepting the foveæ, which are shallow, linear, well separated and moderately punctate, the carinæ very obtuse, the transverse impressions almost obsolete; elytra one-half longer than wide, scarcely visibly wider than the prothorax, obtusely ogival in apical third; striæ moderate, slightly impressed and finely not closely punctate, the scutellar moderate, the lateral series more widely spaced but not interrupted medially; intervals nearly flat even apically; metasternum with some coarse punctures laterally, the episterna subimpunctate. Length (♂♀) 7.0–7.2 mm.; width

2.9 mm. Lake Superior (White-Fish Point),—Schwarz. [*Amara schwarzi* Hayw.] ..... **septentrionalis** Lec.

Body more or less stout in form 3

3—Larger species, always well over 8 mm. in length, with a definite though obtuse carina at the thoracic angles 4

Smaller species, under 8 mm. in length, without an external basal thoracic carina 5

4—Form oblong-suboval, convex, polished black above and beneath; legs black, the femora obscure rufous; elytra of the female not distinctly less shining; head three-fifths as wide as the prothorax, or less (♀); eyes prominent, the strioles small, fine, antennæ ferruginous, much shorter than the head and prothorax, the latter two-fifths (♂) to one-half (♀) wider than long, the apex rather deeply sinuate, with prominent blunt angles, much narrower than the base, which is slightly arcuate at each side, the sides narrowly but strongly, evenly reflexed, evenly arcuate from apex to the basal angles, which are minutely prominent; impressions nearly obsolete; surface sparsely punctulate medio-basally, the foveæ linear, widely separated, having scattered moderate punctures; median stria much abbreviated at apex; elytra one-half longer than wide and slightly though evidently wider than the prothorax, gradually ogival in apical two-fifths; striæ rather strong though very moderately impressed and distinctly, though not coarsely, punctured, the scutellar oblique, moderate; lateral series very widely interrupted; intervals but just visibly convex, not more so at apex. Length (♂♀) 8.4–10.5 mm.; width 3.4–4.4 mm. New York (Lake Champlain) to Illinois (Highland Park) and Lake Superior (Marquette and Duluth). Abundant. [*B. lævistriatus* Putz.; also *liber* and *oregonus* Lec.]
latior Kirby

Form and general habitus nearly as in *latior* but not quite so elongate and less deep black, the elytra faintly picescent, the under surface and legs throughout somewhat obscure rufous, the former sometimes blackish-piceous, similarly shining in both sexes and convex; head not quite so large, less than three-fifths as wide as the prothorax, otherwise nearly as in *latior*, the antennæ similar; prothorax shorter, fully one-half wider than long in both sexes, otherwise very nearly as in *latior*, except that the foveæ are more shallow; basal punctuation similarly variable in amount; elytra one-half longer than wide, still more evidently wider than the prothorax, rather more rapidly and obtusely ogival behind, the sculpture subsimilar. Length (♂♀) 9.0–9.4 mm.; width 3.8–4.1 mm. Arizona (Humphreys Peak). Four examples. Named in honor of Andrew A. Humphreys, U. S. Engineers. ..... **humphreysi** n. sp.

Form and habitus nearly as in the preceding, oblong, stout, convex, black, less shining, the abdominal segments rufescent at apex; legs obscure rufous; head larger than in the preceding, though scarcely three-fifths as wide as the prothorax, the eyes moderate, prominent; antennæ (♀) ferruginous, extending to about basal third of the prothorax, which is as in *humphreysi*, except that the reflexed lateral margins are feebly rufescent and the anterior angles still more broadly

rounded; elytra similar in outline and relative size, but differing in having all the striæ rather fine and much more finely punctate, the flat intervals becoming more noticeably convex at apex; lateral series less broadly interrupted. Length (♀) 9.0 mm.; width 3.9 mm. New Mexico..... **deceptus** n. sp.

5—Upper surface in both sexes highly polished, as though glazed, the elytra in the female without trace of alutaceous lustre or minute sculpture. Body oblong-suboval, convex, deep black above and beneath, the extreme abdominal tip rufous; legs rufous throughout: head moderate, barely over half as wide as the prothorax, the eyes moderately prominent; strioles fine, very oblique; antennæ slender, ferruginous, not quite as long as the head and prothorax, the latter widest at about the middle, short, three-fifths wider than long, the apex very feebly sinuate, with rounded angles and barely three-fourths as wide as the base, which is transverse; sides evenly rounded from apex to base, the angles distinctly more than right, not rounded and not at all prominent, the margins finely reflexed; surface impunctate, except finely and sparsely at base, the median stria very fine and feeble; foveæ shallow, the inner linear, the outer short and suboblique; elytra slightly more than one-half longer than wide, about three times as long as the prothorax and somewhat wider, the parallel sides broadly, subevenly arcuate; striæ extremely fine, unimpressed, minutely punctate suturally, impunctate elsewhere, the scutellar rather long, nearly free; lateral series more or less narrowly interrupted; sinus small and shallow; under surface subimpunctate throughout. Length (♀) 7.5 mm.; width 3.35 mm. Arizona (Tuçson),—Tucker..... **specularis** n. sp.

Upper surface shining but less glazed, the elytra alutaceous and distinctly micro-reticulate in the female.....6

6—Body oblong-suboval, convex, black, the abdomen rufescent apically, the legs piceo-rufous; head slightly more than half as wide as the prothorax, with prominent eyes and narrow oblique strioles; antennæ ferruginous, much shorter than the head and prothorax, the latter large, widest at about the middle, barely two-fifths wider than long, the apex deeply sinuate, with rather narrowly blunt angles, much narrower than the base, which is rectilinear; sides finely but abruptly reflexed, evenly arcuate from apex to base, the basal angles distinctly more than right, not rounded and not prominent; surface with obsolete impressions, sparsely punctate apically and basally, the foveæ shallow, more punctate, the inner sublinear, the outer smaller and rounded, distant from the base as usual in this subsection; elytra widest at the middle, scarcely one-half longer than wide, parallel, with rather strongly and evenly arcuate sides, almost a fifth wider than the prothorax, the humeri not exposed, minutely denticulate; striæ rather fine but deep, not impressed, finely punctulate anteriorly, the scutellar moderate; lateral series moderately interrupted; intervals flat, alutaceous (♀), slightly less flat apically; sides of the metasternum, met-episterna and latero-basal parts of the abdomen finely, sparsely punctulate; anterior tibiæ with five

or six short stout external spinules apically. Length (♀) 7.8 mm.; width 3.5 mm. Colorado (Denver).....**relictus** n. sp.

Body smaller and narrower, nearly similar in lustre and coloration, the abdomen not rufescent apically; legs dark rufous; head not actually larger, though almost three-fifths as wide as the prothorax, the eyes and strioles nearly as in the preceding, the ferruginous antennæ still shorter; prothorax shorter, one-half wider than long, the sinuate apex similarly narrower than the base, but with more obtusely rounded angles; sides and basal angles nearly similar; surface less smooth, transversely wrinkled toward the median stria, which is much finer; apical parts without trace of punctures; foveal regions finely, strongly punctate, the medio-basal part almost impunctate; foveæ nearly similar; elytra as in *relictus* but more gradually and acutely ogival behind, one-half longer than wide, at the middle evidently wider than the prothorax, the sides arcuate; striæ similarly fine but more impressed, almost completely impunctate, the scutellar moderate, fine, the lateral series similar; scutellum broader; intervals very feebly convex, not at all more so apically, less alutaceous (♀) than in *relictus;* metasternum and episterna impunctate; anterior tibiæ nearly similar. Length (♀) 7.4 mm.; width 3.25 mm. Colorado (Colorado Springs),—Cockerell.....**obsolescens** n. sp.

Body much more parallel, the elytra less inflated, polished, black, the legs obscure rufous, the femora piceous; head less than three-fifths as wide as the prothorax, with prominent eyes and fine oblique strioles; two basal joints of the antennæ ferruginous, the remainder missing in the type; prothorax barely two-fifths wider than long, widest at the middle, with the sides very evenly arcuate and finely, strongly reflexed from apex to base, the basal angles but little more than right, not rounded; apex distinctly sinuate, with rather well rounded angles, much narrower than the transverse base; impressions subobsolete, the median stria very fine; surface impunctate, except finely, sparsely and deeply at the foveæ, which are shallow and nearly as in the two preceding; elytra two-fifths longer than wide, only very little wider than the prothorax, the sides feebly arcuate; striæ moderately fine, evidently impressed and without obvious punctures, the scutellar moderate, almost free, the lateral series very moderately interrupted; intervals barely evidently convex; under surface with very few fine punctures at the sides of the metasternum. Length (♂) 7.5 mm.; width 3.25 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend.

***æqualis** n. sp.

7—Form oblong-suboval, very moderately convex, black, the legs rufopiceous; surface highly polished, with a varnish-like glaze; head nearly three-fifths as wide as the prothorax, the eyes unusually large, rather prominent; strioles very small, linear; antennæ extending to the thoracic base, colored differently and as in *Amara*, piceous-black, the three basal joints and base of the fourth bright testaceous; prothorax one-half wider than long, widest just behind the middle apex moderately sinuate, with obtuse blunt angles and scarcely more than three-fourths as wide as the base; sides subevenly rounded

from apex to base and finely, abruptly reflexed, the angles minutely subprominent; impressions very feeble, the stria very fine; surface completely impunctate; foveæ extremely feeble but otherwise as in the preceding, impunctate; elytra rather more than one-half longer than wide, not distinctly wider than the prothorax, the parallel sides feebly arcuate; striæ fine, very feebly impressed, not evidently punctate, the scutellar rather long, extremely fine and feeble; lateral series somewhat widely interrupted; hind tibiæ (♂) with rather numerous fine suberect hairs within; under surface impunctate. Length (♂) 5.8 mm.; width 2.35 mm. California (Gualala, Mendocino Co.).....**immundus** n. sp.

The posterior tibiæ of the male in *æqualis* are absolutely devoid of internal pubescence but, as the facies is entirely as in the neighboring species, I cannot transfer it to *Celia*, where the prothorax would be incongruous. So also in *immundus*, nearly all the characters are those of *Amara*, excepting the more erect and stiffer internal hairs of the posterior male tibiæ; the ocellate puncture of the scutellar striæ and the coloration of the antennæ, are to be particularly noted in this comparison; the facies of the body, however, is exactly as in the other species of the fourth group of *Bradytus*. All this serves to indicate that general habitus of the body is the criterion of chief importance in estimating genera in the Amarinæ, but this habital character is extremely important and in my opinion decisive.

If the genus *Bradytus* is to be maintained, as I believe to be warrantable, the name *septentrionalis* of LeConte, is to be restored. The synonymy given above under *latior* is derived from the work of Hayward; its correctness is demonstrable in the case of *lævistriatus* and *liber*, but I am doubtful in regard to *oregonus*.

Percosia Zimm.

This is really one of the better defined and more consistent groups of the Amarinæ, though wholly disregarded and united with *Celia* by Horn. In habitus it contrasts strongly with *Celia* in its much larger size of body, of oblong-oval form and thicker, denser integument. In the cluster of setæ on the prosternal process it is apparently unique in the Amarine series. The absence of pubescence along the inner side of the posterior male tibiæ distinguishes it from *Amara*, where this pubescence is always fine, decumbent and dense, but in the Amarinæ at large the character is not so important.

The mentum tooth in *Percosia* is large, triangular, with the apex deeply and sharply bidentate, the ligula corneous and very long, tapering gradually from apex to the narrow base. The middle tibiæ are slightly bent at the middle in the male. The five species of the American fauna may be known as follows:

Latero-basal carina of the pronotum very oblique.....2
Latero-basal carina subparallel with the side margin and, posteriorly, more remote from the angles than in the preceding section.....5
2—Eyes nearly flat, only very slightly convex. Body narrower and less stout than in *obesa*, black throughout, the legs black; surface shining, the elytra densely alutaceous or subopaque; head scarcely more than half as wide as the prothorax, the strioles short; antennæ slender, almost as long as the head and prothorax, fuscous; prothorax longer than usual, scarcely more than a third wider than long; apex feebly sinuate, much narrower than the base; sides parallel in about basal half, rounding anteriorly, rather broadly reflexed and punctulate, more narrowly at apex; basal angles right; impressions very feeble; median stria broadly impressed, obsolete at apex; foveæ large, shallow, completely confluent and not separately distinguishable, and having many strong deep punctures extending across the middle; elytra one-half longer than wide, fully a fifth wider than the prothorax, parallel, with arcuate sides; striæ abrupt and groove-like, evidently punctured, the scutellar long; lateral series not at all interrupted; intervals flat, feebly convex apically. Length (♀) 10.5 mm.; width 4.7 mm. Colorado (Denver). Nebraska—LeConte.....**diffinis** Lec.
Eyes not prominent, though much more convex than in the preceding; prothorax shorter and much more transverse.....3
3—Body narrower and more elongate, the elytra more than one-half longer than wide; pronotal foveæ broadly and completely confluent. Coloration and lustre nearly as in the preceding; side margins of the pronotum diaphanously rufescent; legs piceous-black; head similar, except that the eyes are rather more convex and the ferruginous antennæ not so long; prothorax one-half wider than long, otherwise nearly as in the preceding; transverse impressions rather distinct; elytra more elongate than in any other and but very little wider than the prothorax, with the sides evenly arcuate; striæ moderately coarse, groove-like, rather feebly punctate, the lateral ocellate series as in the preceding; intervals nearly flat, densely alutaceous in the female, distinctly convex posteriorly. Length (♀) 10.3–11.0 mm.; width 4.7–5.0 mm. Oregon (Clackamas Co.)..**extensa** n. sp.
Body obese, the elytra generally less than one-half longer than wide; pronotal foveæ never completely confluent, generally very distinctly defined, isolated and less closely punctured.....4
4—Coloration nearly as in the preceding, the tarsi rufescent; head as in *extensa* but relatively not quite so large; prothorax also nearly similar but even less sinuate at apex, the rounded sides becoming nearly straight behind the middle and strongly reflexed and punctulate;

elytra more obtusely rounded behind and much more distinctly wider than the prothorax, with feebly arcuate sides and deep marginal gutter, very opaque (♀) or polished (♂), the striæ (♀) finer, feebly impressed and finely punctate, coarser (♂) and more abruptly groove-like and also with more convex intervals; lateral series uninterrupted; subapical sinus shallow; anterior tarsi (♂) broadly dilated, the first three joints each with two oblique series of very stout and erect, setiform fulvous squamules beneath. Length (♂♀) 9.0–12.0 mm.; width 4.3–5.3 mm. Lake Superior (Bayfield and Marquette) and New York; also an unlabeled example from the Levette collection. Moderately abundant. The male and female both have two setigerous foveæ at each side of the apex, the pairs closer in the male; it is allied to the European *patricia* Duft., but is apparently by no means the same species. . . . . **obesa** Say

Coloration generally rather more rufo-piceous in the female, where the elytra are opaculate; they are black and with varnish-like polish throughout in a male assumed to be of this species but without locality label; head one-half as wide as the prothorax, of the usual structure, the eyes well developed but not very convex; prothorax one-half to three-fifths wider than long, with general form and structure as in *obesa*, but more transverse and with the side margins still more broadly, strongly reflexed and usually more completely attaining the base outside of the carina; elytra two-fifths longer than wide, barely visibly wider than the prothorax, the striæ coarse, groove-like and at the same time impressed, being much coarser, deeper and more strongly punctate than in the female of *obesa*. Length (♀) 11.7 mm.; width 5.6 mm. Northern Illinois (Highland Park). **latissima** n. sp.

5—Form short, very stout, ventricose, convex; coloration and lustre as in *obesa*, the elytra opaculate in the female; head half as wide as the prothorax, the eyes more prominent than usual, the antennæ obscure ferruginous, not quite extending to the thoracic base; prothorax slightly less than one-half wider than long, as in *obesa*, except that the sides are more widely reflexed toward base, where the obtuse carina is less oblique than usual, and, more especially, abbreviated well before the basal margin; foveæ large, shallow, imperfectly separated; elytra barely two-fifths longer than wide, about a fifth wider than the prothorax; parallel and arcuate at the sides, striæ rather strongly impressed, not fine and with the strong punctures crenating the convex intervals; sides of the metasternum, the met-episterna and the abdomen latero-basally with numerous moderate equal punctures. Length (♀) 10.5 mm.; width 5.0 mm. New York (Long Island). . . . . **ventricosa** n. sp.

While all the above forms adhere closely to a common generic facies, I feel quite certain that they differ specifically from each other. The single male placed with the type of *latissima* was unlabeled in the Levette collection and has the surface highly polished —as though glazed—throughout above; it is not deep black and

has scarcely perceptible ænescent lustre; the elytral intervals are perfectly flat, while in the other species the intervals are distinctly convex in the male, though flat in the female. The elytra in this male example are notably wider than the prothorax. I have not seen *fortis* Lec.—shining in both sexes, said by Horn to belong to this genus.

Celia Zimm.

This is by far our largest genus of the Amarinæ and only an insignificant fraction of the species have been described. The body is very moderate in size and includes some of the smallest species of the subfamily; the coloration is frequently pale, even when mature, with the integuments rather thin, sometimes almost diaphanous, although the *erratica* and *californica* groups have dense integuments as in *Amara*. The mentum tooth is bidentate, the prosternal lobe always sharply and rather finely margined and the middle tibiæ unmodified sexually; the posterior male tibiæ are not pubescent within. The anterior strioles of the head are fine and moderate, sometimes feebly oblique. In our fauna there are six well defined subgeneric groups, each easily recognizable by reason of general habitus; they may be defined as follows:

Legs black; body oblong-oval, with dense and frequently metallic integuments; prosternum not evidently modified in the male; facies somewhat as in *Amara;* the pronotum wholly impunctate....I (*erratica*)

Legs not black.....2

2—Prosternum with an elongate opaque central impression in the male; integuments dense; body oblong-oval; pronotum nearly as in the preceding group, impunctate.....II (*californica*)

Prosternum of the male with an unimpressed central spot, which is very finely punctulate.....3

Prosternum of the male unmodified or with vestigial punctulate spot..4

3—Anterior male tarsi strongly dilated; sides of the prothorax straight or subsinuate basally; integuments dense; body parallel, the prothorax less abbreviated.....III (*rectangula*)

Anterior male tarsi moderately to feebly dilated; prothorax more abbreviated, the sides arcuate to the base; body oblong-oval; integuments thin and paler as a rule.....IV (*remotestriata*)

4—Body more elongate, subparallel, with metallic lustre and usually dense integument, the elytral striæ always very fine, generally impunctate.....V (*aurata*)

Body less elongate, more oblong-oval, never having pronounced metallic lustre and with the integuments generally thinner and more or less pallid; elytral striæ less fine and more impressed as a rule and usually distinctly punctate; species including the smallest of the genus. VI (*rubrica*)

The *erratica* group is spread widely over the subarctic parts of the northern hemisphere; the strial intervals are usually somewhat irregularly elevated, at least in part. The *californica* group seems to be confined to the western parts of North America, extending southward through most of Mexico. The *rectangula* group comprises at present but a single peculiar species, confined to the Pacific regions. The *remotestriata* group contains a great many usually pallid species, of more or less robust form, widely distributed over the northern hemisphere. The *aurata* and *rubrica* groups seem to be peculiarly North American, the former confined to the Pacific, the latter to the Altantic, regions; one species of the *rubrica* group occurs in British Columbia and one each in Arizona and Chihuahua; no species of the *aurata* group occurs far from the Pacific coast line.

Group I

The antennæ in this group are black, as well as the legs, although the antennal base is often paler in color. The species are rather numerous, the group extending far into Mexico; those at hand may be known as follows:

Body stouter; head better developed, always at least somewhat more than half as wide as the prothorax 2

Body narrower, the size smaller as a rule; head notably smaller, never more than half as wide as the prothorax in either sex 8

2—Upper surface with pronounced metallic lustre 3

Upper surface without metallic lustre 5

3—Pronotum rather distinctly depressed externally toward base; strial intervals remarkably irregular. Body oblong, very moderately convex, rather shining, the elytra strongly alutaceous in the female; color of the upper surface varying from bright bronze to dark green; legs black, the femora faintly rufescent; head evenly convex, with rather prominent eyes, the strioles small, linear and oblique; antennæ black, slender, the two basal joints dark rufous; prothorax less abbreviated than in the four following and three-fifths wider than long, the sinuate apex much narrower than the base; stria very fine, much abbreviated; surface with a feeble striiform impression at basal third, nearer the middle than the sides and, nearer the angle, one that is feeble and oblique; basal angles right, not blunt, the puncture equidistant from base and side, the anterior puncture at two-fifths from the blunt but prominent apical angles; elytra less than one-half longer than wide, very slightly wider than the prothorax, the sides feebly arcuate; apex ogivally lobed at the middle; striæ very fine, impunctate, the scutellar long, the lateral ocellate series moderately interrupted; intervals alternately rather elevated

and irregularly nodulate to greater or less degree. Length (♀) 9.3–9.5 mm.; width 4.2 mm. Pennsylvania. Two examples. [*Amara splendida* Hald. and *inæqualis* Kirby]..... **patruelis** Dej.

Pronotum never noticeably depressed externally; strial intervals smooth to faintly irregular in surface.....4

4—Form oblong-oval, moderately convex, bright green in color throughout above, piceous beneath, the legs black; elytra rather shining though somewhat alutaceous in the female; head as in the preceding, with prominent eyes, the strioles rather deep, well developed and very oblique; epistoma evenly sinuate at tip; antennæ slender, the medial joints two and one-half times as long as wide, black, the basal joint alone rufescent; prothorax nearly four-fifths wider than long; apex with rather prominent though slightly blunt angles, deeply sinuate and much narrower than the base, the sides subevenly and moderately arcuate, becoming almost parallel basally, finely reflexed; surface very slightly less convex postero-externally, the stria and impressions nearly as in the preceding; elytra fully one-half longer than wide, with very feebly, evenly arcuate sides, at the middle only just visibly wider than the prothorax, the apex subevenly, rather obtusely rounded, the sinus distinct; striæ and lateral series as in *patruelis*, the intervals nearly smooth and subequal, though there is a scarcely observable alternation in convexity, nearly flat as a rule; beneath wholly impunctate as usual in this section. Length (♀) 8.4–8.6 mm.; width 3.7–3.75 mm. Two examples. Arizona (southern),—F. H. Snow..... **lauta** n. sp.

Form somewhat stout, oblong-oval, rather convex, bronzed above, black beneath, the coxæ obscure rufous; elytra shining, alutaceous in the female, with strong micro-reticulation; head convex, smooth, with well developed but only moderately prominent eyes, the strioles very small, widely separated and oblique; antennæ black, the two basal joints rufescent, the medial joints on the compressed side less than twice as long as wide; prothorax as in *lauta*, almost twice as wide as long; anterior lateral fovea similarly a little before posterior third; side margins even more finely reflexed; elytra similar in size and relative proportion, also similar in the fine striæ, but different in having the striæ feebly impressed, the intervals consequently feebly convex and, more especially, in the form of the subapical sinus, which is small and moderately deep in *lauta*, but very much broader and relatively shallower in the present species; under surface punctureless; tarsi long. Length (♀) 8.3 mm.; width 3.8 mm. Utah (Provo),—Wickham..... **formalis** n. sp.

Form more parallel and oblong, smaller in size and less convex than in either of the two preceding; lustre dull bronze above; head moderate, just visibly more than half as wide as the prothorax, the eyes very moderately convex; strioles small, fine and oblique; antennæ black, with the first joint pale, extending to the thoracic base, shorter (♀), the middle joints on the narrow edge between two and three times as long as wide; prothorax barely visibly less than twice as wide as long, in outline and surface nearly as in the preceding, the outer of the postero-lateral impressions extremely shallow and

not at all oblique or linear, the inner short and striiform; elytra rather narrower, one-half longer than wide, scarcely visibly wider than the prothorax, less convex, the subapical sinus small and rather abruptly formed, much less broad and shallow than in *formalis;* striation similar, the alternate intervals rather more notably convex; apex more ogivally lobiform; scutellum smaller. Length (♂ ♀) 7.6–8.2 mm.; width 3.5–3.7 mm. New Mexico (Jemez Springs, Sta. Fé and Fort Wingate) and Colorado (Boulder Co.) . **farcta** Lec.

Form nearly as in *farcta* but much smaller and distinctly narrower, bright brassy-bronze in lustre; under surface with polished greenish lustre; legs rufo-piceous, the femora black; elytra alutaceous in the female, though micro-reticulate in both sexes; head slightly more than half as wide as the prothorax, with moderately convex eyes and well developed, somewhat irregular strioles; antennæ rather stout, black, with rufous basal joint, the medial joints on the compressed side one-half (♂) to a third (♀) longer than wide; prothorax short, very nearly twice as wide as long; apex deeply sinuate, with prominent and only narrowly blunt angles, much narrower than the base; sides finely reflexed, subevenly and feebly arcuate, scarcely parallel basally; inner subbasal striole fine, short and subobsolete, the outer small, fine, oblique and barely evident; transverse impressions distinct; elytra nearly one-half longer than wide, at the middle slightly wider than the prothorax, the sides arcuate, gradually ogival in more than apical third; striæ fine, impunctate, the scutellar moderate, the lateral series narrowly interrupted medially; intervals nearly flat, the marginal greenish; subapical sinus small but rather deep. Length (♂ ♀) 7.2–7.7 mm.; width 3.2–3.3 mm. California (Truckee). Two examples taken by the writer . . . . . **finitima** n. sp.

5—Antennæ with the basal joint alone paler. Form oblong, rather depressed, feebly shining, the elytra alutaceous, black, the under surface shining and with pronounced greenish lustre; legs, coxæ and trochanters black, sometimes partially with feeble piceous tinge; head convex, the eyes rather large but feebly convex; strioles longer than usual, deep and sometimes inflated internally; antennæ not very slender, short, black, with rufous basal joint, extending to about basal third of the prothorax in the female; prothorax fully three-fourths wider than long, the sides very gradually converging and feebly arcuate from base to apex, the latter sinuate, with prominent and scarcely at all blunt angles and much narrower than the base; basal angles right, not rounded; surface nearly smooth, the inner striole short, the outer diffused and feeble; elytra less than one-half longer than wide, slightly wider than the prothorax, the sides evenly arcuate, the sinus wide and rather deep, not abrupt; striæ very fine, impunctate, the scutellar long; lateral series narrowly or only partially interrupted; intervals nearly flat, alternately just visibly convex. Length (♀) 8.3 mm.; width 3.75–3.8 mm. Nevada (Reno). Two examples taken by the writer . . . . . **subdepressa** n. sp.

Antennæ with two or three basal joints paler 6

6—Body rather narrowly oblong-oval, convex, shining, the elytra (♀) but slightly alutaceous; under surface and legs black, not at all met-

allic, the coxæ rufescent; head with rather prominent eyes, the strioles moderate and oblique; antennæ piceous-black, with two rufescent basal joints, extending to about basal fourth of the prothorax, the latter two-thirds wider than long, the sides very finely reflexed, subevenly and moderately arcuate, becoming parallel basally; apex sinuate, much narrower than the base and with rather blunt, not very prominent angles; basal angles right, not rounded; surface feebly impressed and with longitudinal rugulæ along the apex, the stria very fine, much abbreviated; inner subbasal striole fine and short, the outer impression small, feeble, sublinear and posteriorly oblique; elytra one-half longer than wide and evidently wider than the prothorax, arcuately ogival in almost posterior half; striæ very fine, impunctate, the scutellar moderate; lateral series rather widely interrupted; sinus wide and shallow; intervals nearly flat, with but faint traces of irregularity. Length (♀) 7.8 mm.; width 3.3 mm. Mexico (Salazar, Mex.),—Wickham.....***consors** n. sp.

Body more broadly oblong-oval, the elytra more rapidly and obtusely ogival behind.....7

7—Form oblong-oval, convex, shining, with very faint bronzy lustre; elytra (♀) but very slightly alutaceous; under surface polished, with slight greenish lustre; legs, coxæ and trochanters deep black; head smooth and convex, with rather prominent eyes, the strioles more minute than usual, extremely short, fine and barely evident; antennæ black, slender, extending to about basal fourth of the prothorax, the two basal joints obscurely rufous; prothorax but little more than one-half wider than long; apex deeply sinuate, much narrower than the base, with prominent though narrowly blunt angles, the basal right and not rounded; sides moderately, subevenly arcuate, rather finely but strongly reflexed and becoming subparallel basally, the surface smooth, not notably depressed latero-basally, the inner striole very small, fine, short and faint, the outer impression lying anteriorly in a very indefinite depression, small and subobsolete; elytra one-half longer than wide, not distinctly wider than the prothorax, ogivally rounded in apical third, the parallel sides feebly arcuate; striæ only moderately fine, somewhat groove-like, impunctate, the scutellar long; lateral series more widely spaced medially but not at all interrupted; intervals flat, feebly convex apically, the sinus shallow. Length (♀) 8.2–8.35 mm.; width 3.75 mm. New Mexico (Fort Wingate),—Shufeldt. Two examples.

modulata n. sp.

Form oblong-oval, convex, almost equally shining in the two sexes, the elytra micro-reticulate in both but shining, with scarcely bronzy lustre, the under surface black, not at all metallic; legs black, the tibiæ and tarsi sometimes rufescent; head but little more than half as wide as the prothorax, the eyes only feebly convex, the strioles well developed and coarse; antennæ black, with two or three pale basal joints; prothorax fully three-fourths wider than long, the apex deeply sinuate, with prominent and rather sharply defined angles, much narrower than the base, the sides evenly and feebly arcuate from base to apex and finely reflexed, not becoming quite parallel

basally; inner subbasal striole very feeble, the outer deep, oblique and foveiform; elytra rather short, two-fifths longer than wide, barely wider than the prothorax; striæ fine, impunctate, the scutellar long, the foveæ of the eighth narrowly though completely interrupted medially; intervals nearly flat throughout, sometimes with alternate slight irregularity. Length (♂ ♀) 8.0–8.6 mm.; width 3.4–3.65 mm. California (Siskiyou Co.). Four examples.

shastanica n. sp.

Form more elongate-oval, convex, shining, black, with barely a trace of metallic lustre, the elytra (♀) strongly micro-reticulate though rather shining; under surface black, without trace of metallic lustre, the legs piceous in the type; head barely more than half as wide as the prothorax, with nearly flat eyes and strong foveiform strioles; antennæ slender, black, the first two joints and basal part of the third rufescent; prothorax much longer than in the preceding, barely one-half wider than long, the deeply sinuate apex much narrower than the base, the angles obtusely rounded at tip; sides feebly, subevenly rounded, becoming parallel at base, the angles right; surface with very indistinct impressions, the outer subbasal fovea rounded, moderately deep, the puncture in the hind angles coarse; elytra fully one-half longer than wide, gradually ogival in rather more than apical third, not distinctly wider than the prothorax, the sinus rather deep; striæ somewhat fine but groove-like, not punctate, the scutellar long, free at both ends; lateral ocellate series widely separated but not definitely interrupted medially; intervals feebly convex, somewhat irregular; striæ coarser, with convex intervals on the declivity. Length (♀) 9.0 mm.; width 3.8 mm. Oregon (Clackamas Co.),—Kermack. . . . . **semota** n. sp.

8—Eyes larger but only moderately prominent, as in most of the preceding species 9

Eyes smaller but strongly convex and prominent, the head evidently still smaller 10

9—Body elongate-oval, rather convex, shining and more or less bronzed above, the under surface and legs deep and uniform black throughout, without metallic lustre of any kind; elytra scarcely less shining in the female, though micro-reticulate in both sexes; head very nearly half as wide as the prothorax, the eyes only feebly convex, the strioles moderate, fine; antennæ extending to the thoracic base, black, the first joint rufous, the second piceous, the third carinate basally; prothorax one-half wider than long to slightly more; apex deeply sinuate, much narrower than the base, with prominent though bluntly rounded angles; sides finely reflexed, evenly and moderately converging and feebly arcuate from base to apex; inner subbasal impression short, feebly impressed and sublinear, the outer small, almost obsolete; transverse impressions feeble though evident; elytra (♂) more or (♀) less than one-half longer than wide, but slightly wider than the prothorax, obtusely rounded in barely apical third, the sinus wide and shallow; striæ fine, the scutellar long; lateral series rather narrowly interrupted; intervals very feebly convex,

somewhat irregular. Length (♂ ♀) 8.0–8.5 mm.; width 3.7–4.0 mm. Nebraska..... **solita** n. sp.

Body more narrowly suboval, much smaller, moderately convex and shining, dull brassy-bronze in lustre, the under surface and legs black; elytra more strongly reticulate in the female; head very nearly half as wide as the prothorax, the eyes slightly more convex than in *solita*, the strioles fine; antennæ black, the two basal joints paler; prothorax but slightly more than one-half wider than long, nearly as in the preceding throughout but less narrowed from base to apex; elytra one-half longer than wide in both sexes, not or just visibly wider than the prothorax, obtusely rounding in apical third, the sinus very shallow; striæ very fine, impunctate as usual in this section, the scutellar moderate; lateral series widely separated, only narrowly interrupted medially; intervals feebly convex and very distinctly irregular or faintly nodulate. Length (♂ ♀) 6.6–7.0 mm.; width 2.8–3.2 mm. Colorado. Levette collection. Three specimens..... **reducta** n. sp.

Body more evenly and less narrowly elongate-oval, also more convex, smoother and more shining than in the two preceding, black, with scarcely perceptible metallic lustre; under surface and legs black; head very nearly half as wide as the prothorax, the eyes moderately convex, the strioles very small, short and fine; antennæ slender, black, the two basal joints paler, the medial joints on the compressed side (♂) about twice as long as wide; prothorax slightly more than one-half wider than long, the deeply sinuate apex with prominent and only moderately blunt angles, much narrower than the base; sides evenly and feebly arcuate, finely reflexed from base to apex, parallel and feebly arcuate basally; surface smooth, with barely a trace of the feeble subbasal impressions, more flattened posteroexternally than usual; elytra one-half (♂) to less (♀) longer than wide, not evidently wider than the prothorax in either sex, polished (♂), alutaceous (♀); striæ very fine and simple, the scutellar long, very fine; lateral series rather widely and sharply interrupted medially; intervals nearly flat throughout the length, having merely the barest trace of alternate irregularity. Length (♂ ♀) 6.8–8.0 mm.; width 3.3–3.6 mm. Kansas and Colorado. Three examples.
ellipsis n. sp.

10—Prothorax very short, nearly twice as wide as long, the apex fully three-fourths as wide as the base. Oblong-oval, moderately convex, very shining and bright æneous above; under surface and legs piceous to black, not metallic; head not quite half as wide as the prothorax, the eyes not large but prominent, the strioles moderate; antennæ notably slender, black, with rufescent basal joint; prothorax four-fifths wider than long, the apex feebly sinuate and with broadly rounded angles; sides feebly, evenly arcuate and greatly converging from base to apex; surface smooth, with nearly obsolete transverse impressions, the subbasal impressions fine and feeble, the inner striolate, the outer oblique; puncture in the angle coarse; elytra two-fifths longer than wide, slightly wider than the prothorax, obtusely rounded behind, with shallow sinus; sides broadly arcuate;

striæ very fine, the scutellar rather short, fine; outer striæ sometimes feebly and irregularly subpunctulate or comminuted; lateral series narrowly interrupted; intervals almost flat, with scarcely visible traces of irregularity. Length (♂ ♀) 6.4–6.7 mm.; width 2.8–3.0 mm. California (Truckee). Three examples.....**nexa** n. sp.

Prothorax much less than twice as wide as long, more narrowed anteriorly, the apex barely two-thirds as wide as the base.....11

11—Form evenly elongate-elliptical, rather convex, moderately shining, black above and beneath, without metallic lustre; legs black; head not half as wide as the prothorax, with well developed and prominent eyes and small linear oblique strioles; antennæ slender, black, the basal joint obscure rufous; prothorax one-half wider than long, the apex feebly sinuate, with obtuse angles; sides strongly converging, evenly and moderately arcuate from base to apex, very finely reflexed; surface smooth, with obsolete transverse impressions and very fine incomplete median stria, the inner subbasal striole short but distinct, near basal fourth, the outer very short, feeble, posteriorly oblique; elytra nearly one-half longer than wide, evenly ogivally rounded in about apical third, very slightly wider than the prothorax, the parallel sides broadly, evenly arcuate; striæ extremely fine, impunctate, the seventh obsolete, the scutellar moderate; lateral series rather widely and sharply interrupted; intervals flat or very nearly, not at all irregular. Length (♂) 7.5 mm.; width 3.3 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend.
*__mora__ n. sp.

Form narrowly oblong-suboval, moderately convex, shining, black, the upper surface with faint bronzy lustre; legs not absolutely black; elytra of the female but little less polished than in the male; head small, not quite half as wide as the prothorax, the eyes strongly convex and prominent, the strioles very fine, oblique; antennæ slender, black, the basal joint very obscure rufous; prothorax slightly more than one-half wider than long; apex very moderately sinuate, with obtusely blunt angles; sides converging, broadly and subevenly arcuate and very finely though sharply reflexed from base to apex; transverse impressions very feeble, the fine median stria incomplete; inner subbasal striole short and small though distinct, the outer oblique, very feebly impressed or subobsolete; angular puncture more distant from side than base; basal angles sharply right; elytra scarcely one-half longer than wide, barely perceptibly wider than the prothorax, evenly ogivally rounded in about apical third, the parallel sides sharply reflexed and feebly arcuate; striæ extremely fine, impunctate, the seventh subobsolete, the scutellar rather long, oblique and faint; lateral series abruptly and somewhat widely interrupted; sinus rather broad and shallow. Length (♂ ♀) 5.85–6.0 mm.; width 2.5 mm. Lake Superior.....**erratica** Stm.

I am by no means sure that the Lake Superior form here identified as the European *erratica*, is really that species, but it is the one commonly so called. It is very peculiar in the sexual characters

at the abdominal apex, there being but one puncture at each side in both sexes, but the last segment is longer in the female than in the male. The identification of our *patruelis* Dej., as *interstitialis*, is one of the most remarkable errors that can be recalled just now, for, referring to Dejean's description of *interstitialis*, from Kamtschatka, it can be seen at once that it is a very much smaller species than *patruelis*. The alternately more elevated and irregular strial intervals, is a character traceable in most of the species of this group to a greater or less degree.

Group II

The species of the *californica* type, constituting this group, are more convex than in the preceding series and have the apex of the prothorax less deeply sinuate; the legs, also, are never black; there is sometimes a feeble trace, however, of the peculiar alternation of convexity in the strial intervals characterizing the *erratica* group. The prosternal characters of the male are amply distinctive. The species known to me are the following:

Prothorax widest at or very near the base.....2
Prothorax not widest at base.....3

2—Form stout, oblong-oval, notably convex, bronzed above, the sides of the prothorax very slightly diaphanous; under surface black, non-metallic, the legs piceous; elytra distinctly micro-reticulate in both sexes but more shining in the male; head well developed, distinctly more than half as wide as the prothorax; eyes moderately prominent, the strioles somewhat deep and coarse; antennæ rather short, obscure rufous, the two basal joints paler rufous; prothorax a little less than one-half wider than long; apex much narrower than the base, feebly sinuate, the angles scarcely at all prominent, blunt; sides converging and evenly, feebly arcuate from base to apex, finely but abruptly, evenly reflexed; surface not at all depressed postero-laterally, punctureless, with subobsolete transverse impressions, the stria very fine, abbreviated; inner of the subbasal foveæ short but linear, deep and distinct, the outer similarly deep, linear and posteriorly oblique outwardly as usual; elytra one-half (♂) to two-fifths (♀) longer than wide, at the middle very distinctly wider than the prothorax, obtuse behind; striæ very fine, punctureless, the scutellar long; lateral series moderately though completely interrupted medially; intervals broad, perfectly flat (♀), nearly so (♂). Length (♂ ♀) 7.3–8.5 mm.; width 3.3–4.2 mm. California (Sonoma to San Diego), also Lower California. Abundant...**californica** Dej.

Form stout, oblong-suboval and convex, almost similar to *californica* in coloration, lustre and general structure, but with the elytra relatively somewhat shorter and with still finer striation; head well developed,

the strioles rather finer; antennæ rufo-ferruginous; prothorax almost perfectly similar, except that the small foveolæ near the base, though similar in position and extent, are feebler; elytra almost similar in every way, but with the striation extremely fine and the intervals flat even in the male. Length (♂ ♀) 7.9–8.9 mm.; width 3.65–3.9 mm. Mexico (Federal District) to Arizona (Tucson). Very abundant.....**mexicana** Dej.

Form rather narrower and more depressed than in either of the preceding, smaller in size and with relatively somewhat smaller head and much shorter prothorax, black, with very faint bronze lustre above, the legs obscure rufous, the femora blackish and submetallic; head but little over half as wide as the prothorax, with prominent eyes and short fine and very oblique strioles; antennæ short, piceous-black, the two basal joints obscure rufous; prothorax fully three-fourths wider than long; apex evenly but not deeply sinuate, the angles blunt; sides feebly converging, finely reflexed and feebly, subevenly arcuate from very near the basal angles to the apex; surface punctureless and with subobsolete transverse impressions, distinctly depressed postero-laterally, the stria short and fine, the inner of the subbasal foveoles short, deep, linear, the outer faintly impressed, oval and subobsolete; elytra rather less than one-half longer than wide, at the middle barely perceptibly wider than the prothorax, obtusely ogival behind; striæ fine, punctureless, the scutellar moderate, free; lateral series moderately though abruptly interrupted; intervals nearly flat, alutaceous. Length (♀) 7.8 mm.; width 3.3 mm. Mexico (near the city),—O. W. B.....***gnara** n. sp.

3—Body still smaller, rather convex, subparallel, shining, with faint greenish-bronze lustre, the under surface and legs dark rufous; elytra (♀) alutaceous, strongly micro-reticulate; head slightly more than half as wide as the prothorax, with prominent eyes and very small punctiform strioles; antennæ short, pale piceo-ferruginous, the three basal joints paler, rufous; prothorax two-thirds wider than long; apex very moderately sinuate, much narrower than the base and with broadly obtuse angles; sides subevenly and moderately arcuate, sharply though narrowly reflexed, becoming subparallel behind about the middle; surface punctureless, not distinctly depressed postero-laterally, the transverse impressions obsolete, the stria very fine, abbreviated; inner of the subbasal foveoles short, fine and linear, the outer oblique, short and feebly impressed; elytra not quite one-half longer than wide, barely perceptibly wider than the prothorax, obtusely ogival behind, the sinus feeble; striæ fine but rather groove-like, impunctate, the scutellar short; lateral series more widely separated medially but not interrupted; intervals wide, almost perfectly flat throughout. Length (♀) 7.5 mm.; width 3.25 mm. Mexico (Salazar, Mex.),—Wickham.....***habilis** n. sp.

Body more abbreviated, rather convex, bronzed above, the under surface and legs dark rufous; elytra alutaceous in the female; head larger than in the preceding, fully three-fifths as wide as the prothorax; eyes prominent; strioles short, fine and oblique; antennæ not extending to the thoracic base, piceous, the two basal joints rufous; pro-

thorax widest near the middle, where it is evidently wider than at base, about one-half wider than long; apex distinctly narrower than the base, very feebly sinuate, the angles not in the least prominent and very broadly rounded; sides evenly and moderately arcuate, strongly but not coarsely reflexed; basal angles more than right and slightly blunt; surface punctureless, the subbasal foveoles somewhat as in the preceding; elytra shorter, scarcely more than a third longer than wide, ogivally rounded behind the middle, barely at all wider than the prothorax, the marginal gutter rather coarse; striæ not very fine, groove-like, impunctate, the scutellar short, fine, oblique; lateral series not evidently interrupted; intervals flat. Length (♀) 6.6 mm.; width 3.2 mm. Mexico (Salazar, Mex.),—Wickham.

***parata** n. sp.

In the first three of the above species the strial intervals frequently display decided traces of the subnodular elevation characterizing most of the *erratica* group, but this feature is not distinctly traceable in the last two; the single types of the latter were taken at the same place by Prof. Wickham and belong to the same subsection of the *californica* group, but they are specifically different, as may be seen from the descriptions; *parata* has a form of prothorax recalling that of certain small species of *Bradytus*, and perhaps there may be some real affinity.

Group III

The general habitus of *rectangula* Lec., sets it apart from all other species of *Celia*, by reason of its elongate parallel outline and less transverse prothorax, so that the propriety of a distinct group for it seems apparent. It is here that some striking characteristics of all the preceding species become obsolete and replaced by others which remain evident through the remaining groups of the genus; this observation refers particularly to the punctureless pronotum and feeble subbasal foveoles of the former and the latero-basal punctures and stronger foveæ of the latter, also to the irregularly elevated strial intervals of the one and the more even intervals of the other. We might therefore have proposed a division of the genus into two equivalent sections, the first composed of groups I and II and the second of groups III to VI. It is only in the second of these two primary subdivisions that punctured elytral striæ become very evident, though this character is scarcely ever noticeable even here, except in Group VI, composed of a host of very small species. The type species of this group is the following:

Body elongate, parallel and moderately convex, polished and deep black above, the elytra feebly alutaceous in the female, black beneath, the legs obscure piceo-rufous, the femora rather paler rufous; head rather small, about half as wide as the prothorax, the eyes prominent, the strioles well developed, deep and somewhat oblique; antennæ ferruginous, scarcely extending to the thoracic base (♂), or distinctly shorter (♀); prothorax only two-fifths wider than long; apex much narrower than the base, distinctly sinuate, the angles broadly blunt; sides broadly, subevenly arcuate and rather finely reflexed, becoming subparallel or even feebly convergent and nearly straight in about basal half, the angles right, minutely everted and prominent in the male; transverse impressions obsolete; median stria fine, almost entire; basal foveæ shallow, impressed and sublinear, with moderate scattered punctures, the inner at about lateral fourth, the outer shorter and oblique; elytra one-half longer than wide, barely at all wider than the prothorax, obtusely ogival behind, the sides feebly arcuate; striæ not very fine and rather deep, distinctly punctate (♂), impunctate (♀), the scutellar long, not free; lateral series variably interrupted; intervals very feebly convex. Length (♂ ♀) 9.0–9.5 mm.; width 3.5–3.8 mm. California (Hoopa Valley, Humboldt Co.) and Oregon. Three examples.

rectangula Lec.

The female comes from the first named locality, the two males from the second, so that I am unable to confirm the sexual nature of the strial punctures, or the lateral prominence of the basal thoracic angles. The head is relatively larger in the two males than in the female, but without further evidence it would scarcely be prudent to maintain that two independent species are involved.

Group IV

This is a large section of the genus, including *remotestriata*, *terrestris*, *chalcea* and many others. The general habitus is so constant throughout that I have considered it better not to form two groups because of the presence or absence of a postero-lateral flattening of the pronotal surface as suggested by Horn, especially as this is not a very sharply limited character and is often very difficult to determine. I have, however, used it in the definition of the species, which are numerous and taxonomically rather troublesome. They are generally of more or less pallid coloration, rather broad outline and moderate convexity and but few exhibit any decided trace of strial punctuation. The elytra are usually alutaceous in the female. So far as known to me they may be described as follows:

Pronotum more or less depressed at the sides basally.....2
Pronotum with the sides not even vestigially depressed basally, convex throughout laterally.....12
2—Elytra subequal in width to the prothorax, the outline of the body more parallel.....3
Elytra inflated at the middle, much wider than the prothorax, and with the base slightly though evidently wider than the thoracic base, as a rule, somewhat as in *gibba*.....9
3—Sides of the pronotum toward base conspicuously depressed.....4
Sides basally only vestigially depressed, the modification generally only discoverable by longitudinal and specially oblique reflection.....5
4—Body stout and oblong-suboval, rather convex, shining, testaceous in color—possibly immature, the under surface and legs pale rufous; elytra alutaceous in the female, the head well developed, distinctly more than half as wide as the prothorax, the eyes rather large, only feebly convex, the strioles moderate, oblique; antennæ pale, slender, extending slightly behind the thoracic base; prothorax nearly three-fourths wider than long, very slightly wider near the middle than at base, the sides broadly arcuate, more so before the middle, rather broadly explanate and reflexed; apex deeply sinuate, much narrower than the base and with bluntly rounded though prominent angles; transverse impressions very feeble, the stria fine, nearly entire; surface with a few fine punctures laterally at base; foveæ moderately impressed, well developed, the inner sublinear, the outer irregular; explanate margins finely punctulate; elytra scarcely a third longer than wide, parallel, very slightly wider than the prothorax and obtusely ogival at apex, the feebly arcuate sides sharply and strongly reflexed; striæ very fine and impunctate, the scutellar rather long, not free; lateral series narrowly and not sharply interrupted; intervals flat and broad; sinus very shallow. Length (♀) 7.0–7.2 mm.; width 3.2 mm. New York (Sheepshead Bay and Rockaway Beach, Long Island),—Schott. Two examples.

laxicollis n. sp.

Body smaller, stout, oblong-suboval, moderately convex, blackish-piceous above and beneath, the legs rufous; upper surface shining, faintly ænescent, the thoracic margins narrowly diaphanous; elytra strongly alutaceous in the female; head distinctly more than half as wide as the prothorax, the eyes large, moderately prominent; strioles rather long, feebly oblique; antennæ obscure rufous, the basal joint clearer, rather long, extending well behind the thoracic base in both sexes; prothorax one-half wider than long, widest at and toward the base, the sides feebly arcuate, slightly more so apically, explanate, the edge sharply reflexed; apex three-fourths as wide as the base, deeply sinuate, with prominent blunt angles; surface throughout very nearly as in the preceding, the punctulation of the explanate sides but very slight or wanting; elytra a third to two-fifths longer than wide, slightly wider than the prothorax, rapidly and obtusely rounded behind, with the sinus very shallow; sides feebly arcuate and sharply reflexed; striæ fine, wholly impunctate, the scutellar long, not free; lateral series narrowly but not abruptly interrupted; intervals wide

and flat in both sexes; first two ventrals sometimes with a very few moderate punctures. Length (♂♀) 6.5–7.5 mm.; width 2.8–3.4 mm. Michigan (Marquette),—Sherman. Twenty-one examples. **brumalis** n. sp.

5—Larger species, always much over 6 mm. in length; lateral ocellate series not medially interrupted.....6

Small species, between 5 and 6 mm. in length.....8

6—Outer thoracic fovea not extending to the basal margin. Body elongate, subparallel, moderately convex, black to dark fulvous, with feeble ænescent lustre above and shining, the elytra alutaceous (♀), polished (♂), black beneath, the legs obscure rufous, the femora piceous; head more than half as wide as the prothorax, with notably prominent eyes, the strioles rather deep but fine and subparallel; antennæ slender, obscure rufous, rather clearer at base, extending about to the thoracic base (♀) or much further (♂); prothorax barely more than one-half wider than long, the sides broadly arcuate and finely, sharply reflexed, subparallel and arcuate basally, broadly arcuate and converging from rather behind the middle to the slightly prominent and bluntly rounded apical angles, the apex moderately sinuate and very much narrower than the base; foveæ rather large, broadly impressed and with numerous moderate punctures, the outer oblique; sides and the remainder of the surface wholly impunctate; elytra nearly one-half longer than wide, obtusely ogival at apex, very slightly wider than the prothorax, the feebly arcuate sides narrowly reflexed; striæ very fine (♀), impressed (♂), the scutellar moderate; intervals wide, convex (♂), very flat (♀); abdomen at the sides basally with rather numerous small punctures. Length (♂♀) 7.5 mm.; width 3.5 mm. Michigan (Marquette),—Sherman. Two examples.....**paganica** n. sp.

Outer thoracic fovea extending to the basal margin.....7

7—Body moderately stout, piceous-black, sometimes with feeble ænescent lustre, polished above, the thoracic sides slightly diaphanous, the elytra only moderately alutaceous in the female; under surface nearly black to obscure rufous, the legs rufous, the anterior femora sometimes blackish; head barely more than half as wide as the prothorax, with rather feebly convex eyes and moderate convergent strioles; antennæ testaceous, slender, extending far behind the thoracic base; prothorax three-fifths wider than long, the sides broadly arcuate, more strongly so and converging anteriorly, generally just visibly converging and nearly straight from the middle to the base, not broadly but strongly reflexed; apex much narrower than the base, very moderately sinuate, the angles prominent but narrowly blunt; surface nearly as in the preceding, the foveal punctures numerous, moderate in size; margins punctureless as a rule; elytra nearly one-half longer than wide, very little wider than the prothorax, rather gradually ogival in more than apical third; striæ fine but distinct, sometimes feebly punctulate toward the suture, the scutellar rather long, not free; intervals nearly flat, sometimes feebly convex apically; abdomen with but few punctures latero-basally; middle male tibiæ slightly bent. Length (♂♀) 6.7–7.8 mm.; width 2.8–3.5

mm. Colorado (Boulder Co. and Eldora) and New Mexico (Las Vegas). Twenty-five specimens..... **terrestris** Lec.

Body somewhat as in *terrestris* but much smaller and relatively somewhat narrower, nearly similar in coloration and lustre; elytra of the female but little less shining than in the male; head relatively very much larger, three-fifths as wide as the prothorax, the eyes very moderately convex, the strioles convergent; antennæ much shorter, extending to about the thoracic base and ferruginous; prothorax less transverse, one-half wider than long, nearly as in *terrestris* throughout, but with the apex relatively less narrowed, being almost four-fifths as wide as the base; punctures in the foveal region still smaller and less numerous as a rule; elytra almost as in *terrestris* throughout, but relatively somewhat shorter when compared with the prothorax, two-fifths longer than wide, the striæ deep, only moderately fine, sometimes feebly punctate though often completely punctureless; middle tibiæ distinctly bent in the male. Length (♂♀) 6.5–7.0 mm.; width 2.65–3.1 mm. New Mexico (Jemez Springs) and Kansas. Thirteen examples..... **defecta** n. sp.

Body almost as in *terrestris* in form and size, similarly colored, the legs and epipleura pale rufous; elytra more strongly alutaceous in the female, subopaque; head similar but relatively somewhat larger, distinctly more than half as wide as the prothorax, the eyes very moderately convex, the strioles distinct, slightly oblique; antennæ flavo-ferruginous, extending slightly behind the prothorax (♂), or to the thoracic base (♀); prothorax throughout nearly as in *terrestris*, the elytra also as in that species, but the striæ are rather finer and deep, groove-like, and are distinctly punctulate in the female, though scarcely visibly so in the male and more distinctly toward the suture as usual; middle tibiæ of the male extremely feebly bent in the middle. Length (♂♀) 6.5–7.6 mm.; width 2.8–3.2 mm. Oregon (Columbia River Valley),—Shantz..... **exposita** n. sp.

Body smaller and narrower than in *terrestris*, similar in color and lustre, the pronotum at the sides more broadly diaphanous and rufescent; upper surface polished throughout in the male; head much more than half as wide as the prothorax, the eyes rather large and strongly convex, more prominent than in *terrestris*, the strioles moderate and slightly converging; antennæ uniformly rufo-ferruginous, extending well behind the prothorax, the latter throughout almost as in *terrestris* in outline and sculpture, except that the apical angles are more broadly obtuse at tip, the basal foveæ much deeper and the punctures of the foveal region coarser and more numerous; both foveæ envelop the basal margin, the surface separating them notably elevated; elytra as in *terrestris* but a little shorter, narrower and with the parallel sides rather more arcuate, the similarly rather fine but groove-like striæ very obsoletely punctulate in some individuals; intervals flat or nearly so; abdomen with a few punctures at the sides of the first segment; middle tibiæ of the male evidently bent. Length (♂) 6.8–7.2 mm.; width 2.55–3.0 mm. Rhode Island (Boston Neck). Two specimens..... **mimica** n. sp.

8—Form narrowly oblong, convex, shining, greenish-black above, the

under surface and legs dark rufous; elytra (♀) micro-reticulate but only faintly alutaceous; head relatively large, two-thirds as wide as the prothorax, the eyes moderately prominent; strioles very short, oblique; antennæ ferruginous, slender, extending well behind the thoracic base; prothorax short, two-thirds wider than long, the sides subparallel and feebly arcuate, more converging and arcuate apically, the finely reflexed margin rufescent; apex nearly four-fifths as wide as the base, sinuate, with slightly prominent though blunt angles; postero-lateral flattening feeble and vestigial; transverse impressions rather distinct; surface almost completely impunctate, the foveæ rounded, very moderate, subequal and impressed, each with two or three very small punctures; elytra two-fifths longer than wide, scarcely at all wider than the prothorax, obtusely ogival behind, the feebly arcuate sides rather narrowly reflexed; striæ very fine, minutely, indistinctly punctulate, the scutellar on both elytra in the type continuing unbroken to the apex, the detached basal part of the first stria widely isolated; foveæ of the eighth not interrupted; intervals flat. Length (♀) 5.4 mm.; width 2.3 mm. New Mexico (Jemez Springs),—Woodgate.....**fontinalis** n. sp.

Form narrowly elongate-suboval, convex, shining, piceous, the legs pale rufous; elytra but faintly alutaceous in the female; head not quite three-fifths as wide as the prothorax; eyes moderately prominent, the strioles moderate, oblique; antennæ rather long, slender, ferruginous, extending well behind the thoracic base; prothorax one-half wider than long, the sides feebly arcuate and finely, sharply reflexed, subparallel in basal, more converging and rounded in apical, half; apex three-fourths as wide as the base, feebly sinuate, the angles narrowly obtuse; postero-lateral flattening barely traceable, vestigial; transverse impressions very faint; foveal region with a few small sparse punctures; foveæ unequal, moderately impressed, the inner linear, the outer much smaller and oblique; elytra fully one-half longer than wide, but slightly wider than the prothorax, gradually ogival behind, the sides feebly arcuate, narrowly reflexed; striæ impunctate, very fine, slightly impressed, the scutellar continuous with the sutural in the type, the basal part of the first slightly detached; intervals very feebly convex; hind tarsi much shorter than in the larger and stouter *terrestris* Lec. Length (♀) 5.8 mm.; width 2.4 mm. Colorado (Eldora),—L. W. Casey.
eldorensis n. sp.

9—Body smaller, with numerous rather strong punctures over the foveal region of the pronotum. Rather narrowly suboval, convex, shining, blackish, the elytra less black and feebly metallic; under surface of the hind body blackish, the remainder and the legs pale rufous; head relatively large, two-thirds as wide as the prothorax; eyes large but only moderately convex, the strioles rather long, fine and oblique; antennæ ferruginous, rather long, extending well behind the thoracic base; prothorax but slightly more than one-half wider than long, the sides moderately arcuate and finely, strongly reflexed, subparallel in basal, more converging and rounded in apical, half; apex three-fourths as wide as the base, feebly sinuate, the

angles narrowly blunt and scarcely prominent; postero-lateral flattening just traceable, vestigial; transverse impressions subobsolete; stria very fine, nearly entire; inner fovea large, scarcely at all impressed and very indefinite, the outer larger than usual, rounded, impressed and attaining the base; elytra a third longer than wide, rapidly obliquely ogival in about apical third, at the middle nearly a fifth wider than the prothorax; humeral denticles extending slightly beyond the thoracic angles; sides arcuate, narrowly but strongly reflexed; striæ moderately fine, impunctate, the scutellar joining the first; lateral series narrowly interrupted; intervals wide, flat; hind tarsi long, both the middle and hind tibiæ somewhat bent in the male; abdominal apex in that sex with a close pair of punctures at each side. Length (♂) 5.8 mm.; width 2.7 mm. Colorado. Levette collection..... **docilis** n. sp.

Body larger, with fewer or feeble punctures in the foveal region of the pronotum..... 10

10—Elytra fully three times as long as the prothorax; sides of the latter parallel and nearly straight in basal half, rounding apically. Body elongate, convex, dark red-brown and scarcely shining, the elytra opaculate in the female; under surface shining, obscure rufous, the legs pale rufous; head fully three-fifths as wide as the prothorax; eyes moderately convex; strioles subangularly foveiform; antennæ slender, ferruginous, extending barely behind the thoracic base; prothorax fully one-half wider than long, the sides finely but sharply reflexed; apex fully four-fifths as wide as the base, moderately sinuate, with blunt angles; transverse impressions feeble, the stria finely impressed, not quite entire; surface gradually feebly deplanate at the sides, more broadly flattened behind; basal punctures rather numerous, extending almost entirely across; foveæ moderate, the inner long and linear, the outer small and rounded; elytra one-half longer than wide, obtusely ogivally rounded behind, a fourth wider than the prothorax, the sides broadly and evenly arcuate; humeri narrowly exposed at base; striæ rather fine, feebly impressed, scarcely punctulate, the scutellar long, joining the first, the lateral series of punctures widely spaced but not interrupted; intervals feebly convex; hind tarsi long, very slender; palpi very long, slender; mentum tooth narrowly and feebly bilobed at tip. Length (♀) 7.5 mm.; width 3.3 mm. A single specimen from the Levette collection, probably taken in Colorado..... **brunnescens** n. sp.

Elytra distinctly less than three times as long as the prothorax, the latter slightly wider at the middle than at base; the humeri narrowly but always evidently exposed at base; body less elongate and evidently more shining..... 11

11—Body stout, oblong-suboval, very shining (♂), the elytra subopaque (♀), piceous above, slightly rufescent beneath, the epipleura and legs pale rufous; head well developed, three-fifths as wide as the base of the prothorax; eyes very moderately convex, the strioles distinct, oblique; antennæ ferruginous, slender, long, in the male extending far behind the thoracic base; prothorax distinctly less than one-half

wider than long, the sides evenly arcuate, sharply reflexed at the edge; apex distinctly sinuate, three-fourths as wide as the base, the angles broadly blunt (♂), or narrowly (♀); transverse impressions feeble, the stria impressed, abbreviated; surface declivously subexplanate posteriorly to the obtuse elevated area outside the outer fovea; foveal region with some moderate punctures; foveæ broadly, feebly impressed, the outer attaining the base; elytra two-fifths (♀) to nearly one-half (♂) longer than wide, rapidly and very obtusely ogival at tip, a fourth wider than the prothorax, the sides broadly arcuate; striæ rather fine but groove-like, almost impunctate, the scutellar long, oblique, not free; lateral series very widely separated medially. Male with a close pair of punctures at each side of the abdominal apex, a widely separated pair in the female. Length (♂♀) 7.3–7.8 mm.; width 3.2–3.3 mm. California (Yreka and in Siskiyou Co.),—Levette and Koebele. . . . . **definita** n. sp.

Body not quite so stout, dark castaneous, shining, the under surface rufous, the legs flavo-rufous; elytra of the female but slightly alutaceous; head evidently more than half as wide as the prothorax; eyes very moderately convex, the strioles distinct, linear, oblique; antennæ rather long, slender, ferruginous, extending well behind the thoracic base; prothorax one-half wider than long, the sides evenly rounded and sharply reflexed; apex more than three-fourths as wide as the base, distinctly sinuate, the angles moderately blunt and prominent; transverse impressions subobsolete, the stria fine, subentire; surface laterally less distinctly declivously explanate than in the preceding, the oblique elevation along the outer fovea rather less pronounced; punctures of the foveal region few and fine; foveæ moderate, rather deeply impressed, the inner sublinear, the outer broader, attaining the base; elytra two-fifths longer than wide to but little more, about a fifth wider than the prothorax, the general form as in the preceding, the surface much more shining in the female; striæ never more than very obsoletely punctulate, the scutellar as in *definita;* intervals flat (♀), or distinctly convex, especially toward the suture (♂); lateral series entire. Male with two close pairs of apical abdominal punctures as in the preceding. Length (♂♀) 6.8–7.9 mm.; width 3.2–3.5 mm. Utah. Four examples. . . . . **obligata** n. sp.

12—Sides of the pronotum somewhat recalling the preceding section, gradually and feebly declivous but without a distinctly marked limitation of the depression. Body very broad, oblong-suboval, rather strongly convex, highly polished throughout in both sexes and deep black, with barely observable ænescence, the sides of the pronotum posteriorly slightly diaphanous and rufescent; under surface piceous-black, the epipleura feebly rufescent, the legs rufous; head not distinctly more than half as wide as the prothorax; eyes prominent, the strioles rather long, fine and oblique; antennæ piceo-ferruginous, the first two joints and most of the third paler, testaceous, much shorter than the thoracic width in the female; prothorax shorter and broader than in any other species and less narrowed at apex, almost twice as wide as long, the sides feebly converging, evenly

and very feebly arcuate from base to apex; basal angles right but obtusely blunt; apex broadly sinuato-truncate, with broadly rounded, unadvanced angles, fully four-fifths as wide as the base; posterior transverse impression obvious, the other obsolete; foveal region with small scattered punctures; inner fovea short, linear, not near the base, the outer deeper, oblique; elytra a third longer than wide, very slightly wider than the prothorax, obtusely ogival behind, the parallel sides feebly arcuate; base not quite as wide as the thoracic base; striæ fine, impunctate, evidently impressed, the scutellar moderate, oblique, not free: lateral series narrowly or indecisively interrupted; intervals broadly convex near the suture. Length (♀) 7.4 mm.; width 3.5 mm. North Carolina (Southern Pines),—Manee.

pinorum n. sp.

Sides of the pronotum rather abruptly and steeply convexo-declivous throughout the length, without trace of depression or gradual declivity.....13

13—Prothorax widest at or very close to the base.....14

Prothorax widest at about the middle, subevenly arcuate almost as in some species of *Bradytus*.....17

14—Body deep black or very nearly black above.....15

Body not black.....16

15—Form oblong-suboval, very convex, shining, the elytra micro-reticulate; margins of the pronotum feebly diaphanous; under surface shining, black; legs obscure rufous, the femora blackish; head but slightly more than half as wide as the prothorax, with prominent eyes, the strioles long, deep and oblique; antennæ dark ferruginous, long, extending well behind the thoracic base; prothorax nearly three-fifths wider than long; apex only two-thirds as wide as the base, feebly sinuate, the angles broadly blunt; sides broadly arcuate, more so anteriorly, subparallel in about basal half, curving inward for a short distance at base to the obtuse angles, finely reflexed; transverse impressions subobsolete; foveal region with some moderate sparse punctures; stria fine, biabbreviated; inner fovea long, sharply linear, the outer small, irregularly punctiform, distant from the base; elytra two-fifths longer than wide, obtusely ogival behind, at the middle with the sides nearly straight, curving inward toward base, distinctly wider than the prothorax, the two bases however equal; striæ moderately fine, groove-like, slightly impressed, impunctate, the scutellar long, oblique, not free; lateral series distinctly interrupted medially; intervals broadly but evidently convex. Male with the middle tibiæ coarsely crenate within but hardly at all bent, the abdominal apex with two punctures at each side. Length (♂) 7.3 mm.; width 3.3 mm. Nevada (Reno).....**nevadica** n. sp.

Form somewhat similar but more abbreviated, black to piceous-black, very convex, shining, the elytra scarcely at all less so in the female; abdomen dark rufous, the legs paler rufous; head rather large, nearly three-fifths as wide as the prothorax and with very prominent but moderate eyes, the oblique strioles somewhat impressed internally; antennæ (♀) ferruginous throughout, short, barely as long as the thoracic width; prothorax two-thirds wider than long, the sides arcu-

ately converging anteriorly, parallel in about basal half, the basal angles slightly obtuse or blunt; apex two-thirds as wide as the base, very moderately sinuate, with somewhat blunt angles; impressions very near base and apex and barely visible; foveæ rather large and deep, irregularly rounded, with rather coarse punctures; elytra a fourth longer than wide, not two and one-half times or long as the prothorax and very slightly wider, gradually ogivally rounded behind the middle, with broadly arcuate sides; striæ very fine, impunctate, the scutellar moderate, oblique, not free; foveæ of the eighth distinctly and sharply interrupted medially; intervals wide, perfectly flat. Length (♀) 6.7 mm.; width 3.2 mm. New York (Staten Island)..... **sodalis** n. sp.

Form oblong-suboval, slightly broader than *sodalis* and somewhat larger, scarcely so convex, polished and brownish-black, with feeble bronzy lustre, the elytra of the female not less shining; under surface shining, nearly black to dark rufous; legs rufous; head much wider than long, with very prominent eyes, slightly more than half as wide as the prothorax, the strioles fine, only slightly oblique; antennæ fuscotestaceous, paler basally, notably short, barely longer than the thoracic width (♀), but evidently longer in the male; prothorax short, fully three-fourths wider than long, the sides but slightly converging, distinctly and subevenly arcuate from the nearly right basal angles to the apex, which is almost four-fifths as wide as the base, feebly sinuate, with broadly rounded angles; base becoming somewhat sinuate at each side; transverse impressions subobsolete; foveal region slightly punctate, the inner fovea rather broadly impressed to sublinear, the outer smaller, deeper and more oblique; elytra a third to nearly two-fifths longer than wide, ogivally rounded in less than apical half, barely wider than the prothorax, the two bases equal; sides feebly arcuate; striæ fine but distinctly impressed, impunctate, much less fine than in *sodalis*, the scutellar short, oblique, free; lateral series completely interrupted medially; intervals broadly and feebly convex, virtually flat in the female; abdominal apex with two punctures at each side in both sexes. Length (♂♀) 6.3–7.3 mm.; width 2.8–3.35 mm. North Carolina (Southern Pines),—Manee. Ten examples..... **chalcea** Dej.

Form elongate-suboval, narrower than *chalcea* and deeper black, the upper surface polished, without trace of metallic lustre; under surface black, the abdominal tip often rufescent; legs obscure rufous; elytra in the female not perceptibly less shining; head large, with prominent eyes, much more than half as wide as the prothorax; antennæ short, scarcely as long as the thoracic width in the female, colored nearly as in *chalcea;* prothorax nearly similar in outline and structure throughout, with the foveal region even less punctured, the inner fovea large, shallow, somewhat punctured, the outer smaller, deeper, rounded, generally almost devoid of punctures; elytra not so broad, similarly ogival posteriorly and even less evidently wider than the prothorax; striation as in *chalcea;* abdominal apex with a single puncture at each side in the male, two as usual in the female.

Length (♂ ♀) 6.3–6.5 mm.; width 2.8 mm. North Carolina (Southern Pines),—Manee. Three examples..... **corvina** n. sp.

16—Body larger, the elytra much wider than the prothorax; anterior tarsi very feebly dilated in the male. Form oblong-suboval, moderately convex, highly polished throughout above in the male, dark castaneous; under surface black, the abdomen and middle of the prosternum rufescent; legs dark rufous; head large, two-thirds as wide as the prothorax, with large and somewhat prominent eyes, the strioles deep, linear and oblique; antennæ ferruginous, long, extending well behind the thoracic base; prothorax relatively small, rather more than one-half wider than long, the sides feebly converging, feebly and subevenly arcuate and finely reflexed from near the base to the apex, curving inward slightly at base, the angles more than right but sharp; apex three-fourths as wide as the base, sinuato-truncate, with broadly obtuse angles; basal impression distinct and with rather coarse punctures throughout the width except medially, the anterior obsolescent; stria very fine, abbreviated; inner fovea large, broad, just visibly impressed, the outer smaller and deeper; elytra two-fifths longer than wide, three times as long as the prothorax and nearly a fourth wider, the base distinctly wider than the thoracic base; sides broadly, feebly arcuate, obtusely rounded in apical third; striæ very finely, slightly punctulate, the scutellar long, longitudinal and free; lateral series moderately interrupted; intervals flat; central prosternal fovea of the male very small, oval, impressed; abdomen with many small punctures latero-basally, the tip with two pairs of punctures. Length (♂) 8.0 mm.; width 3.65 mm. Arizona..... **amplipennis** n. sp.

Body smaller, much narrower, the elytra not distinctly wider than the prothorax. Form elongate-oval, convex, polished, pale castaneous; under surface and legs rufo-flavate; head shorter than wide, three-fifths as wide as the prothorax, with moderate but prominent eyes and coarse deep converging strioles; antennæ ferruginous, notably short, not longer than the thoracic width (♂), still shorter (♀); prothorax three-fifths wider than long, the sides broadly arcuate and feebly converging from the base, slightly more arcuate very gradually toward apex, finely reflexed; apex two-thirds as wide as the base or more, feebly sinuate, the angles broadly blunt; impressions very faint; foveal region with a few widely scattered punctures; inner fovea broadly impressed and partially sublinear, the outer deeper, rounded, not quite basal; elytra two-fifths to one-half longer than wide, gradually rounded, in apical two-fifths, with the sides feebly arcuate, the thoracic and elytral bases equal; striæ moderately fine, subimpressed suturally, impunctate, the scutellar short, oblique, free; lateral series distinctly interrupted; intervals wide, flat or nearly so; central fovea of the prosternum (♂) very small, impressed, narrowly oval; abdominal apex with two punctures at each side in both sexes. Length (♂ ♀) 6.0–6.8 mm.; width 2.5–2.9 mm. New York (Jamaica, Long Island),—Fred. M. Schott..... **schotti** n. sp.

Body nearly as in the preceding but shorter, the elytra not distinctly wider than the prothorax. Darker castaneous, very feebly metallic,

the elytra rather paler than the anterior parts, highly polished above; under surface piceous-black, the legs dark rufous; head nearly as long as wide, distinctly more than half as wide as the prothorax; eyes very convex and prominent, the strioles short, oblique; antennæ pale ferruginous, slender, moderately long and extending behind the thoracic base; prothorax three-fifths wider than long, the sides very feebly reflexed, just visibly converging and nearly straight from the rather rounded basal angles to beyond the middle, then gradually more rounded and moderately converging to the apex, which is nearly three-fourths as wide as the base, very feebly sinuate and with broadly blunt angles; surface very smooth, the impressions barely traceable, the stria fine, much abbreviated; base with some scattered punctures throughout except medially; inner fovea short, deep, linear, the outer moderately deep, oblique; elytra two-fifths longer than wide, obtusely rounded in about apical third, the sides feebly arcuate; surface micro-reticulate; humeri projecting very slightly outside the thoracic base; striæ fine, impunctate, slightly impressed, the scutellar short, oblique, free at tip; lateral series narrowly interrupted; intervals very feebly convex; central spot of the male prosternum larger, oval, simply flattened and very finely punctulate; abdominal apex with a single puncture at each side in the male. Length (♂) 6.4 mm.; width 2.65 mm. New York (Wyandanch, Long Island),—Schott.....**sphærops** n. sp.

17—Line of ocellate punctures of the eighth elytral stria not at all interrupted. Body small in size, deep black, shining, the elytra moderately alutaceous in the female; under surface black, the legs piceous or partially blackish; head nearly three-fifths as wide as the prothorax, with prominent though moderate eyes and rather long deep oblique foveoles; antennæ piceous, gradually testaceous basally, extending somewhat beyond the thoracic base; prothorax three-fifths wider than long, convex, the sides subevenly rounded, rather more converging apically than basally; apex fully three-fourths as wide as the base, distinctly sinuate, with broadly blunt angles, the basal nearly right, not blunt; impressions feeble, the anterior obsolescent; foveal regions with very few small punctures, the stria fine, subentire; foveæ well impressed, the inner narrowly linear, the outer shorter and oblique; elytra a third longer than wide, barely visibly wider than the prothorax, rather gradually rounding behind, the parallel sides feebly arcuate, the thoracic and elytral bases equal; striæ rather fine, feebly but obviously impressed, impunctate, the scutellar short, oblique; intervals not quite flat; punctures of each pair at the abdominal apex of the female unusually close-set. Length (♀) 5.8 mm.; width 2.7 mm. A single example, unlabeled in the Levette collection but probably from Colorado.....**merula** n. sp.

Line of punctures distinctly and more or less widely interrupted submedially; body larger.....18

18—Elytra inflated, widest at or slightly behind the middle, with arcuate sides. Body short, stout, convex, deep black, shining, the elytra distinctly micro-reticulate and slightly alutaceous in the male; under surface black, the legs dark piceo-rufous; head rather large, more

than three-fifths as wide as the prothorax, with prominent eyes and deep arcuate subparallel strioles; antennæ obscure ferruginous, brighter rufous basally, extending well behind the thoracic base; prothorax only slightly more than one-half wider than long, the sides evenly arcuate, finely but sharply and strongly reflexed; apex fully four-fifths as wide as the base, rather distinctly sinuate, with broadly rounded angles, the basal evidently obtuse but not rounded; impressions obsolete, the stria fine, long; foveal region with fine sparsely scattered punctures; inner fovea fine, long, deep and linear, the outer small, rounded, impressed and not basal; elytra a third longer than wide, submedially a fifth wider than the prothorax; base slightly wider than the thoracic base; striæ very fine but sharply defined, impunctate, the scutellar rather long, oblique, not free; intervals wide and perfectly flat. Male prosternum with a small rounded unimpressed area of fine punctures; abdominal apex in that sex with a close-set pair of punctures at each side. Length (♂) 6.4 mm.; width 3.05 mm. Nevada (Reno).....**lugubris** n. sp.

Elytra oblong, parallel, feebly arcuate at the sides.....19

19—Head large, shorter than wide, with very prominent but moderate eyes; body more parallel, the elytral base never more than barely perceptibly wider than the thoracic base.....20

Head moderate, as long as wide or nearly; prothorax shorter.....21

20—Body elongate, parallel, moderately convex, shining throughout in the male; under surface piceous-black, the legs obscure rufous; head nearly two-thirds as wide as the thoracic base, the strioles somewhat unevenly impressed; antennæ long, obscure ferruginous, extending fully to the thoracic base in the male; prothorax one-half wider than long, widest at the middle, the sides rounded anteriorly, becoming straight and oblique in basal half; apex broad, more than four-fifths as wide as the base, broadly but evidently sinuate, with rather narrowly blunt angles; transverse impressions obsolete; foveal region with many rather close-set, moderately strong punctures; inner fovea fine, linear, the outer more oval, deep, oblique and with its outer boundary rather elevated; elytra one-half longer than wide, slightly though rather evidently wider than the prothorax, rounded in apical third, the sides feebly arcuate; striæ fine but deep and sharp, very slightly impressed in the male, the scutellar long, free at tip; intervals not quite flat; prosternum (♂) with a rather large oval central area, which is minutely punctate and not even flattened, the abdominal apex with a moderately close-set pair of punctures at each side. Length (♂) 8.0 mm.; width 3.4 mm. New Mexico (Fort Wingate),—Shufeldt.....**nupera** Horn

Body somewhat similar in general form but slightly less elongate, black or paler; under surface and legs rufous, with the upper surface polished throughout in the male, the elytra densely alutaceous in the female; head nearly similar, the antennæ much shorter in both sexes, far from attaining the thoracic base; prothorax slightly more transverse, two-thirds wider than long, more evenly rounded at the sides, otherwise nearly as in *nupera*, except that there are generally fewer and finer punctures in the foveal area, the foveæ nearly simi-

lar; elytra almost similar but rather broader, the striæ (♂) as in *nupera*, or (♀) unimpressed and finely punctulate, the scutellar notably short (♀), longer (♂), free; intervals nearly flat (♀) or as in the preceding (♂). Length (♂ ♀) 7.5–8.2 mm.; width 3.2–3.5 mm. New Mexico (Sta. Fé),—Mary W. Greene. . . . . **greenei** n. sp.

21—Elytra not distinctly wider than the prothorax, the two bases as nearly as possible equal. Body oblong-suboval, convex, shining, the elytra distinctly alutaceous in the female, dark castaneous above, piceous beneath, the legs dark rufous; head barely more than half as wide as the prothorax, with prominent eyes and rather long and fine, somewhat oblique strioles; antennæ ferruginous, slender, extending well behind the thoracic base in both sexes; prothorax fully three-fourths wider than long, the sides subevenly arcuate, rather more converging anteriorly; apex three-fourths as wide as the base, moderately sinuate, with broadly rounded angles; impressions very feeble, the stria fine, subentire; foveal region with extremely few fine punctures, almost impunctate; inner fovea feeble, irregularly lineate, the outer more rounded, deeper and oblique; basal angles slightly more than right but not rounded; elytra three-sevenths longer than wide, gradually ogival in slightly less than apical half, the sides feebly arcuate; striæ fine but deep and sharply defined, impunctate, feebly impressed, the scutellar only moderate in length, oblique and not free; intervals very feebly convex. Male prosternum with a small and narrowly oval flattened punctured area, the abdominal apex with a pair of close-set punctures at each side; tarsi thicker than in *terrestris*. Length (♂ ♀) 6.2–7.2 mm.; width 2.8–3.2 mm. Colorado (Boulder Co. and Eldora),—L. W. Casey. **scolopax** n. sp.

Elytra medially distinctly wider than the prothorax, the base evidently wider than the thoracic base as a rule 22

22—Elytral striæ very fine, unimpressed. Body narrower, elongate-oval, convex, shining, the elytra barely visibly less shining in the female, castaneous; under surface piceous, the legs bright rufous; head much more than half as wide as the prothorax, with rather prominent eyes and fine deep oblique strioles; antennæ ferruginous, slender, extending slightly behind the thoracic base; prothorax fully three-fourths wider than long, the sides subevenly arcuate; apex nearly four-fifths as wide as the base, just visibly sinuato-truncate, with rather broadly rounded angles; the basal angles much more than right but not blunt; impressions very feeble; stria fine, slightly abbreviated; basal regions throughout the width strongly but not densely punctate, more finely and sparsely medially; inner fovea impressed, short, linear, the outer rounded, feebly impressed, distant from the base; elytra fully one-half longer than wide, gradually rounded posteriorly from a little behind the middle, at the middle nearly a fifth wider than the prothorax; striæ fine, evidently punctulate, the scutellar rather long, oblique, not free at tip; intervals flat. Male prosternum with a rather large and oval, finely punctate central area, which is not even flattened, the abdominal apex with a moderately close pair of punctures at each side; tarsi

long and slender. Length (♂ ♀) 6.5–7.4 mm.; width 2.7–3.0 mm. Arizona (probably Apache Co.). . . . . **apachensis** Csy.

Elytral striæ distinctly impressed in both sexes. Body broader and relatively shorter than in the preceding, convex, piceous-black in color, highly polished in both sexes, the elytra not at all alutaceous in the female; under surface not paler, the legs rufous; head distinctly more than half as wide as the prothorax, with well developed but only moderately prominent eyes, the strioles straight, clear-cut and oblique; antennæ ferruginous, slender, extending behind the thoracic base; prothorax relatively small but broader, three-fourths to four-fifths wider than long, the sides evenly and strongly arcuate, rather strongly reflexed; apex fully three-fourths as wide as the base, broadly though distinctly sinuate, with broadly blunt angles; basal impression distinct, the other obsolete, the stria fine, not entire; hind angles, basal punctuation and foveæ nearly as in the preceding; elytra shorter and more inflated, two-fifths longer than wide, a fifth wider than the prothorax, the sides broadly arcuate; striæ fine but deep, evidently to obsoletely punctulate, the scutellar moderately long, widely free behind as a rule; intervals very moderately (♂) to rather strongly (♀) convex. Male prosternum with a shorter and more rounded, usually unimpressed central area, which is more densely punctate than in *apachensis*, the punctures of the pairs at the abdominal apex less approximate. Length (♂ ♀) 7.0–7.8 mm.; width 3.2–3.35 mm. Arizona. Five examples. . . . . **patula** n. sp.

The species above described under the name *brunnescens*, apparently cannot be founded upon one of the Colorado series identified as *brunnea* Gyll., by Horn, for the pronotum is said by the latter author not to be deplanate posteriorly at the sides in his specimens, the prothorax only a third wider than long and the mentum tooth acute. There is, however, a faint trace of an oblique elevation at the outer side of the outer fovea, but less pronounced than in several other unrelated species, such as *definita*, *obligata* or *nupera*, where the mentum tooth is distinctly bidenticulate as usual.

The above description of *chalcea* is founded upon a form which seems to represent the species, but I doubt that it can really be the one described by Dejean, for the upper surface has but slight metallic lustre, so that the name *chalcea* seemingly could not have been given it by any systematist of Dejean's sense of fitness. When living this species exhales a very strong odor of the Pterostichid order.

The species described in the table above as *corvina*, having only one puncture at each side of the abdominal apex in the male, ought to be related to *robustula* Horn, from California, but the two are

obviously not identical, *corvina* being smaller, narrower, more parallel and with highly polished male elytra. Again, *amplipennis*, as described above, must be allied rather closely to *gibba* Lec., having the elytral base similarly distinctly wider than the prothorax, but *gibba*, of the Lake Superior region, differs in its darker coloration, obscure femora, more convex upper surface and other characters. The reference of *apachensis* Csy., by Dr. Horn, first to *remotestriata* and subsequently, after another superficial observation, to *gibba*, were wholly arbitrary and erroneous statements.

The above series of four species from *terrestris* to *mimica*, are those referred to *remotestriata* by Dr. Horn, but as these four species are valid among themselves and *remotestriata* was described from Unalaska Island, I am forced to hold that the true *remotestriata* does not occur within our more southern faunal areas and that *terrestris* and the other three species referred to are amply valid.

Group V

In the *aurata* group the body is narrower, more parallel and more elongate than in the preceding *remotestriata* group, and metallic coloration is the rule rather than the exception; the integuments, also, are generally though not always thicker and firmer. A few fine central punctures on the male prosternum are apparently observable in some of the species, so that the presence of this prosternal punctulation in *imitatrix*, referred by Horn for this reason to the *gibba* group of that author, does not have the importance attached by him to the character; *imitatrix* is in fact a member of the *aurata* group, and is included in the following table of the species known to me at present; the line of ocellate punctures of the eighth stria is invariably interrupted submedially:

Elytral striæ distinctly punctulate. Body elongate-subparallel, rather convex, polished, black, with feeble æneous lustre, the thoracic side margins diaphanously rufous; under surface black, the legs dark rufous; head moderate, with prominent eyes and deep oblique strioles; antennæ slender, extending well behind the thoracic base, fusco-ferruginous, paler basally; prothorax one-half wider than long, the sides nearly parallel in basal, gradually converging and rounded in apical, half; apex sinuate, much narrower than the base, with moderately blunt but somewhat prominent angles; sides rounding in at base, the angles obtuse; basal region with small scattered punctures, feeble medially; inner fovea broadly impressed, linear, the outer

obsolete; elytra very slightly wider than the prothorax, about one-half longer than wide, the sides rounding in apical third; striæ fine, very feebly impressed, the scutellar long and free but more or less disintegrated; intervals nearly flat; femora much shorter than the tibiæ; abdominal apex with a single puncture at each side in the male, the anterior tarsi feebly dilated. Length (♂) 6.0 mm.; width 2.45 mm. California ..... **imitatrix** Horn

Elytral striæ impunctate, or occasionally with minute and vestigial punctulation 2

2—Antennæ more than usually compressed, broad, on the flat side with the joints medially not more than one-half longer than wide. Form shorter, oblong-suboval, convex, shining throughout, black, with moderate æneous lustre above, the thoracic margins not pale; under surface greenish-black, the legs bright rufous; head three-fifths as wide as the prothorax, the eyes notably feeble in convexity; strioles deep, straight and oblique; antennæ fuscous, paler basally, extending behind the thoracic base; prothorax scarcely one-half wider than long, the sides subparallel in basal two-thirds, rounding and converging apically; apex feebly sinuate, with short, clearly defined, scarcely blunt angles; impressions very feeble; the only punctures are fine and scattered between the foveæ, the inner rather fine, deep and linear, the outer small, rounded and feebly impressed; elytra distinctly less than one-half longer than wide, nearly a fifth wider than the prothorax, gradually ogival behind; striæ fine though sharply defined, impunctate, the scutellar moderately long and free, disintegrated; intervals flat. Male with a very small narrow area of extremely minute sparse punctulation at the centre of the prosternum, the abdomen as in the preceding. Length (♂) 5.6 mm.; width 2.4 mm. California (Monterey) ..... **rotundiceps** n. sp.

Antennæ slender, normally compressed, the medial joints narrower. . . . 3.

3—Body notably small and narrowly suboval, the integuments rather thin, frequently with the pronotum broadly diaphanous laterally and basally. Upper surface convex, polished throughout and ænescent in both sexes; under surface pale brown, the legs pale rufous; head nearly three-fifths as wide as the prothorax, the eyes prominent; strioles somewhat short, deep, oblique; antennæ testaceous, rather long, extending well behind the prothorax, the latter one-half wider than long, the sides feebly arcuate, more so apically and moderately toward base, the basal angles obtuse and rather broadly rounded; margins strongly reflexed; apex much narrower than the base, feebly sinuate, with narrowly blunt angles; punctures very fine and sparse at the foveæ, the inner of which is indefinitely impressed and sublinear and the outer obsolete; transverse impressions subobsolete; elytra one-half longer than wide and rather evidently wider than the prothorax, obtusely rounded in apical third, the parallel sides broadly arcuate; striæ very fine, impunctate, the scutellar feeble to altogether wanting; intervals perfectly flat. Male prosternal modifications obsolete. Length (♂ ♀) 5.3–5.4 mm.; width 2.2 mm. California (San Diego). Three specimens. . **jacinto** n. sp.

Body of normal size for this section and with normally thick integument....4

4—Prothorax shorter and more transverse, at least one-half wider than long....5

Prothorax longer, less than one-half wider than long....8

5—Body stouter, more oval, the sides of the prothorax distinctly rounded from base to apex. Moderately convex, shining and rather bright to feebly æneous in lustre, the elytra barely at all alutaceous in the female; under surface shining, greenish-black, the legs pale rufous; head slightly more than half as wide as the prothorax, with large but only moderately prominent eyes and coarse deep and slightly oblique strioles; antennæ slender, fuscous, the basal joints testaceous, with blackish apices; prothorax nearly three-fifths wider than long, widest slightly behind the middle, the arcuate sides a little more converging anteriorly; apex three-fourths as wide as the base, sinuate, with moderately blunt and slightly prominent angles; impressions subobsolete; punctures of the foveal region numerous, small and sparse, extending almost to the middle; inner fovea short, broadly impressed, sublinear, the outer rounded but excessively feeble; elytra one-half longer than wide, only slightly wider than the prothorax, gradually ogival posteriorly; sides feebly arcuate; striæ very fine, sometimes slightly punctulate, the scutellar feeble, free, generally in great part wanting; intervals flat. Length (♀) 6.15–6.3 mm.; width 2.5–2.6 mm. California....**aurata** Dej.

Body more parallel, the sides of the prothorax parallel and but slightly arcuate, rounding anteriorly....6

6—Antennæ longer, extending well behind the prothorax in the male, shorter and extending to the thoracic base in the female. Oblong-oval, rather convex and shining, the elytra barely at all alutaceous in the female, black, with faint bronzy lustre, sometimes paler from immaturity, the under surface piceo-rufous and the legs pale rufo-flavate; head moderate, with large, rather prominent eyes and oblique deep strioles; antennæ fusco-testaceous, the first two joints, and the third except at tip, paler; prothorax scarcely one-half wider than long, less transverse than in the two following, the apex broadly sinuate, with bluntly rounded angles; impressions nearly obsolete, the stria fine; punctures numerous and distinct, confined wholly to the foveal region; foveæ very feebly impressed, the inner linear, the outer small and rounded; elytra distinctly less than one-half longer than wide, rather gradually ogival behind, slightly wider than the prothorax; striæ fine but sharp and deep (♂), or very fine and more superficial (♀), the outer striæ feebly punctulate and the scutellar rather long, free at both ends; intervals perfectly flat (♀), or nearly so (♂). Length (♂♀) 6.2–6.8 mm.; width 2.7–2.8 mm. California (Farallone Islands, San Francisco Co.),—Fuchs. Three examples....**farallonica** n. sp.

Antennæ shorter and more nearly equal in the sexes, extending barely beyond the thoracic base in the male; elytra more elongate; prothorax shorter....7

7—Form elongate, rather narrower than in the preceding, deep polished black, sometimes with very feeble bronzy lustre, the female elytra barely at all alutaceous; under surface greenish-black, the legs pale rufous; head relatively somewhat larger than in the preceding, with rather smaller but more prominent eyes, three-fifths as wide as the prothorax; antennæ rather slender, colored as in the preceding; prothorax one-half wider than long, the basal angles slightly obtuse and blunt; apex much narrower than the base, distinctly sinuate, with the slightly prominent angles only narrowly blunt; punctures and foveæ nearly as in the preceding, except that the former are rather finer and the latter more profoundly impressed; elytra (♂) nearly one-half longer than wide, or not quite so long (♀), only very slightly wider than the prothorax, the striæ fine, a little stronger and more impressed in the male, the scutellar moderately long but much disintegrated, more noticeably so than in the preceding, the outer striæ sometimes faintly comminuted or subpunctulate, the seventh stria almost completely obsolete in both sexes as in *farallonica*. Length (♂♀) 6.3–6.8 mm.; width 2.65–2.8 mm. California (San Francisco). Five examples taken by the writer and one by Mr. Fuchs.....**proba** n. sp.

Form oblong-elongate, convex, black, with very faint greenish or bronzy lustre; under surface black, the abdominal tip rufescent; legs pale rufous; head well developed and with prominent eyes nearly as in the preceding; antennæ fusco-testaceous, the two basal joints clearer testaceous; prothorax shorter and relatively somewhat narrower than in either of the two preceding, somewhat more than one-half wider than long, the sides rounding inward at base, the angles very obtuse and blunt; apex relatively a little broader and only very feebly sinuate, the angles broadly blunt and not prominent; transverse impressions feeble, though evident, the stria very fine; punctures of the foveal region very fine and sparse; inner fovea distinct, impressed, sublinear, the outer almost completely obsolete to feeble and broadly sublinear; elytra two-fifths longer than wide, more distinctly wider than the prothorax than in the two preceding, the striation nearly similar, but the scutellar stria is very variable, either a long disconnected series of dashes, or short, entire and free at both ends, or short, oblique, entire, free at base but united at apex with the sutural stria, in the three specimens examined, the seventh subobsolete. Length (♂♀) 5.75–6.7 mm.; width 2.4–2.7 mm. California (San Clemente Island, off the southern coast). Four examples. The female exceeds the male in size more notably than in the other species.....**clementina** n. sp.

8—Body elongate, parallel, convex, shining, bright subcupreous to metallic green; elytra but faintly alutaceous; under surface black, the legs obscure rufous; head three-fifths as wide as the prothorax, with prominent eyes and oblique irregular strioles; antennæ slender, fusco-testaceous, the first three joints clearer, extending but slightly behind the thoracic base (♂), or shorter (♀); prothorax a third to two-fifths wider than long, the sides parallel, feebly arcuate, rounding apically; apex three-fourths as wide as the base, very feebly sin-

uate, with rather blunt angles; basal angles more than right but not rounded; impressions obsolete; punctures of the foveal region rather small and numerous; inner fovea long, broadly impressed, linear, the outer feeble to obsolete; elytra slightly less than one-half longer than wide, gradually ogival behind, rather distinctly wider than the prothorax, with parallel and broadly arcuate sides; striæ fine but sharply defined, slightly impressed in the male, the seventh very fine and feeble, subdisintegrated, the scutellar very short to completely wanting; intervals feebly convex to flat. Length (♂ ♀) 6.0–6.2 mm.; width 2.4–2.6 mm. California (Humboldt Co.—Redwood Creek and Hoopa Valley). Four examples.....**hilaris** n. sp.

Body parallel, elongate, convex, polished, rather bright bronze in lustre, the female elytra evidently alutaceous; under surface black, the legs rufous; head nearly as in the preceding, the eyes prominent; strioles almost parallel; antennæ extending but slightly behind the thoracic base, piceous, the first three joints testaceous; prothorax never much over a third wider than long, the sides parallel, gradually rounding apically, the basal angles barely more than right, usually not blunt; apex nearly as in the preceding, feebly though evidently sinuate; impressions obsolete; punctures of the foveal region fine, few in number and sparsely scattered; inner fovea long, broadly impressed and linear, the outer more rounded, evident and near the basal margin; elytra almost one-half longer than wide, barely visibly (♂) or slightly (♀) wider than the prothorax, rapidly and obtusely ogival behind; striæ very fine, similar in the sexes, the scutellar long but more or less disintegrated, free at both ends; intervals flat in both sexes; seventh stria very feeble. Length (♂ ♀) 6.4–7.0 mm.; width 2.6–2.8 mm. Oregon (Columbia River Valley),—Shantz. Three specimens.....**evanida** n. sp.

Body very narrow and elongate, convex, polished, black, with barely perceptible metallic lustre; under surface black, the legs obscure rufous, the femora blackish; head two-thirds as wide as the prothorax, with rather large and prominent eyes and coarse deep oblique strioles; antennæ long and slender, extending rather far behind the thoracic base, fuscous, gradually testaceous basally; prothorax a third to two-fifths wider than long, the parallel sides gradually a little more rounding anteriorly, narrowly but strongly reflexed as usual, the basal angles slightly more than right, not rounded; apex extremely feebly sinuate, with broadly blunt angles; impressions obsolete, the stria fine; punctures of the foveal region small, moderately numerous; inner fovea irregularly linear, feeble, the outer obsolete or very nearly; elytra about one-half longer than wide, gradually ogival behind, rather distinctly wider than the prothorax; striæ very fine, the seventh nearly obsolete, the scutellar wanting or vestigial; intervals flat. Length (♂) 5.8–6.3 mm.; width 2.35–2.4 mm. California (Siskiyou Co.),—Koebele. Three specimens. .**angustior** n. sp.

Although feeble lineiform punctulation, or perhaps more correctly comminution, of the lateral striæ is frequently observable,

the punctures in *imitatrix* seem to be somewhat different, being distinct but not rounded or deep in all the striæ except the deeper sutural. The evanescent seventh stria is a group character, as well as the constantly rather broadly interrupted line of ocellate punctures of the eighth. The scutellar stria is less definite and more fugitive than in any other group of this genus, although also a feature of the very small species of group VI to some degree. It is interesting to note that the species having a more elongate prothorax are characteristic of the more northern faunas, while those with shorter and more transverse prothorax are, so far as known, confined to southern and insular regions.

Group VI

The species of this group are all small and include among them the smallest of the Amarinæ; they are unexpectedly numerous, also, constituting a very difficult study; after developing sufficient familiarity, however, the species are found to be no more indefinite than in any other part of the *Celia* series. They are characterized in general by a very convex body, with highly polished surface and frequently pallid, though generally rather thick, integument; in all but a few cases they are similar in the sexes, so far as lustre is concerned, although some, such as *harpalina*, have alutaceous elytra in the female; they also have deep and coarse, sometimes strongly punctate, elytral striæ and completely lack a prosternal punctured spot in the male. There is seldom any trace of metallic coloration, the name *subænea*, given by LeConte, being in great part fanciful. It is also to be noted that the group does not occur in the Pacific coast regions of the continent, excepting, so far as known at present, the single species *sinuosa*, of British Columbia. Those in my collection may be known as follows:

Form elongate; prothorax but little wider than long, much narrowed anteriorly, the apex deeply sinuate and with prominent, scarcely at all blunt angles; elytra (♀) generally feebly alutaceous. 2
Form usually less elongate, the prothorax more transverse, the apex very feebly sinuate and with broadly blunt angles 7
2—Head at least half as wide as the prothorax 3
Head very small, distinctly less than half as wide as the prothorax in both sexes 4
3—Body elongate-suboval, convex, shining, piceous-black, the prosternum, abdomen and legs rufous; head half as wide as the prothorax,

with rather prominent eyes and short oblique and lineiform strioles; antennæ ferruginous, extending slightly behind the thoracic base; prothorax but little more than a fourth wider than long; apex three-fifths as wide as the base; sides arcuate, becoming gradually parallel behind the middle; basal angles right, the puncture very small; impressions obsolescent, the stria fine; punctures of the foveal region small, sparse and few; foveæ feebly impressed, the inner sublinear and extending to the base, the outer small, punctiform and more discal; elytra barely perceptibly wider than the prothorax, one-half longer than wide, very gradually ogival behind, the sides just visibly arcuate; humeri minutely denticulate, extending slightly outside the thoracic angles; striæ not coarse but deep and distinct, finely punctulate, the scutellar rather long and free, much disintegrated; intervals very nearly flat in the female. Length (♀) 6.5 mm.; width 2.7 mm. British Columbia (Aldermere),—Keen. . . . . **sinuosa** n. sp.

Body oblong-oval, convex, polished, black, the under surface and legs nearly as in the preceding; head just visibly more than half as wide as the prothorax, with the eyes well developed but only moderately prominent, the strioles and antennæ somewhat as in *sinuosa*, the antennæ somewhat less pallid, ferruginous; prothorax a third wider than long, just visibly wider behind the middle than at base, the sides evidently arcuate throughout, gradually more converging before the middle; basal angles very slightly more than right, the puncture strong, symmetrically placed in the angle; apex three-fourths as wide as the base, deeply sinuate; punctures of the foveal area numerous and strong; inner fovea very broadly, feebly impressed, indefinitely linear, the outer rounded, deep, punctiform and discal; elytra not quite one-half longer than wide, at the middle as wide as the widest part of the prothorax, ogival in apical two-fifths, the sides broadly arcuate, the base exactly equal to the thoracic base; striæ fine but deep, very minutely, distantly and indistinctly punctulate, the scutellar long, entire, free at tip; intervals perfectly flat in the female. Length (♀) 5.65 mm.; width 2.4 mm. A single example from the Levette collection, probably taken in Colorado.

elusa n. sp.

4—Form more slender, sides of the prothorax arcuately converging anteriorly only before the middle. Parallel, convex, polished, piceous-black, with scarcely observable ænescence; under surface piceous, the legs rufous; head with relatively large and prominent eyes, the strioles fine, linear and oblique; antennæ ferruginous, slender, extending well behind the thoracic base; prothorax a third wider than long, the parallel sides nearly straight behind the middle, except at base, the angles slightly more than right, with symmetrically placed puncture; apex barely three-fifths as wide as the base; punctures of the foveal region rather coarse and numerous; foveæ both deeply impressed, rounded and next to the basal margin; elytra about one-half longer than wide, gradually ogival in almost apical two-fifths, very slightly wider than the widest part of the prothorax, the sides but very feebly arcuate; striæ deeply impressed but not coarse, very moderately punctate, the scutellar rather long, free and entire;

intervals broadly convex. Length (♂) 6.2 mm.; width 2.4 mm. New York (Lake Champlain).....**nupta** n. sp.

Form less slender; thoracic sides more arcuate, converging anteriorly from behind the middle, the prothorax often inflated and sometimes wider than the elytra.....5

5—Prothorax inflated, wider than any part of the elytra. Body elongate-oval, convex, highly polished throughout and rufo-castaneous, the under surface paler, rufous, the legs flavo-rufous; head with moderately prominent eyes and short feebly impressed and subfoveiform strioles; antennæ long, ferruginous, extending to the middle of the body, rather thick, the joints very strongly obconic; prothorax two-fifths wider than long, the sides strongly arcuate; apex very narrow, four-sevenths as wide as the base, deeply sinuate and with prominent though bluntly pointed angles, widest well behind the middle, the margins very finely and not strongly reflexed; basal angles obtuse, not rounded, the moderate puncture nearer base than side; impressions obsolete, the stria deep, entire; punctures of the foveal regions few, very coarse and widely dispersed; inner fovea large, broadly impressed, oblong, the outer smaller, irregular; elytra nearly one-half longer than wide, barely twice as long as the prothorax and slightly narrower, gradually ogival behind the middle; striæ rather coarse, very deeply impressed, strongly punctured internally, almost completely impunctate externally, the scutellar short, free and entire; intervals everywhere strongly convex. Length (♂) 6.3 mm.; width 2.65 mm. Colorado (Boulder Co.).....**thoracica** n. sp.

Prothorax sometimes perceptibly inflated but nowhere wider than the elytra.....6

6—Oblong-suboval, convex, piceous-black, very faintly subæneous, polished, the elytra frequently deep black and always with faint alutaceous lustre in the female; under surface piceous-black, the legs bright rufous; head very small, much less than half as wide as the prothorax, the eyes only moderately convex; strioles short, linear and oblique; antennæ long and slender, extending far behind the thoracic base in the male, pale ferruginous; prothorax a third to two-fifths wider than long, the apex narrow, deeply sinuate; sides broadly arcuate, moderately reflexed; basal angles scarcely more than right and not rounded; transverse impressions feeble, the anterior close to the sinus; punctures of the foveal regions rather sparse, moderate and not very numerous; foveæ distinctly impressed, the inner linear, the outer irregularly rounded, with the external bordering surface rather prominently convex; elytra nearly one-half (♂) to two-fifths (♀) longer than wide, equal in width to the prothorax (♂) or just visibly wider (♀), the sides feebly arcuate; apex very gradually ogival; striæ not coarse but rather deeply impressed, distinctly but not coarsely punctate, the scutellar moderate, generally entire; widely free at tip; intervals broadly and subsimilarly convex in both sexes. Length (♂♀) 5.4–6.5 mm.; width 2.5–2.75 mm. Lake Superior (Marquette and Duluth). Very abundant. Thirty-one specimens.....**subænea** Lec.

Oblong-suboval, larger and stouter than the preceding, one of the largest species of this section, piceous-black, with black elytra, polished, without trace of metallic lustre, the elytra faintly alutaceous in the female; under surface piceous; legs very obscure, the femora paler, rufous; head and antennæ nearly as in the preceding, the prothorax also nearly similar, but scarcely a third wider than long and with more arcuate sides, the apex similar, the basal angles not rounded and barely more than right; transverse impressions obsolete; punctures of the foveal regions stronger, closer and more numerous, the foveæ nearly similar but larger and more broadly impressed; elytra subsimilar in general outline, equal in width to the prothorax, with feebly arcuate sides; striæ a little coarser and deeply groove-like, wholly without evident punctures, the scutellar moderate, entire, broadly free at tip; lateral series similarly uninterrupted; intervals broadly convex, more shining than in the female of *subænea*. Length (♀) 6.9 mm.; width 3.1 mm. Colorado (Boulder Co.) ..... **hospes** n. sp.

7—Body rufous to flavo-rufous when mature 8

Body piceous to black, the head and prothorax, however, usually very slightly paler or less black than the elytra 16

8—Coloration of the upper surface uniform 9

Coloration bipartite, the elytra more obscure than the head and prothorax 13

9—Head relatively large, fully three-fifths as wide as the prothorax. Form oblong-suboval, rather elongate, convex, polished throughout and pale rufo-testaceous; femora brighter rufous than the tibiæ and tarsi; head fully as long as wide, with prominent eyes, the strioles short, oblique; antennæ ferruginous, distinctly longer than the thoracic width; prothorax as elongate as in the preceding section but with the apex very feebly sinuate, with broadly blunt angles, a third wider than long; sides broadly arcuate, converging anteriorly, the basal angles slightly obtuse and blunt; impressions obsolete, the stria fine as usual; punctures of the foveal regions rather few in number but strong; foveæ broadly impressed, the inner briefly sublinear, the outer rounded and punctiform; elytra three-sevenths longer than wide, just visibly wider than the prothorax, obtusely ogival in apical third, the sides feebly arcuate; striæ strong and impressed, with very distinct close-set punctures, the scutellar rather short, punctate, oblique and free; lateral series narrowly and indefinitely interrupted; intervals distinctly though not strongly convex; tarsi slender. Length (♀) 5.8 mm.; width 2.5 mm. Delaware. **lucina** n. sp.

Head relatively much smaller, never more than slightly exceeding half the thoracic width 10

10—Prothorax more elongate, nearly as in the preceding and much less than one-half wider than long. Pale rufo-testaceous throughout, the femora rather more flavate; lustre very shining, the elytra not very distinctly alutaceous in the female; head slightly more than half as wide as the prothorax, with prominent eyes and long slender flavate antennæ; prothorax barely two-fifths wider than long, the

sides subevenly and strongly arcuate, becoming parallel basally, the angles right but rounded, the puncture strong, nearer base than side; apex two-thirds as wide as the base, feebly sinuate, with broadly blunt angles; impressions obsolete; punctures of the foveal regions few and sparse, moderate in size; foveæ feebly impressed, the inner sublinear, the outer smaller and rounded; elytra nearly as in the preceding in form and relationship, the striæ finer, much less impressed and only very finely though obviously punctate, the scutellar still shorter, widely free at tip, the lateral series rather sharply though not broadly interrupted; intervals flat. Length (♀) 6.0 mm.; width 2.8 mm. New Jersey (Cape May).....**proditor** n. sp.

Prothorax decidedly transverse, one-half or more wider than long....11

11—Basal thoracic angles right and not definitely rounded, though finely blunt at apex. Body elongate-oval, convex, polished, pale rufo-testaceous, the legs somewhat more flavate, the femora more slender than in either of the two preceding; head scarcely more than half as wide as the prothorax, with prominent eyes and very small strioles; antennæ ferruginous, slender, much longer than the thoracic width; prothorax distinctly more than one-half wider than long, the sides broadly, evenly arcuate, parallel only near the base; apex three-fourths as wide as the base, very feebly sinuate, with broadly rounded angles; impressions obsolete; foveal regions in the type wholly impunctate, excepting a small cluster within the inner fovea, which is broadly, feebly impressed and sublinear, the outer very small, feeble and punctiform; angular puncture rather small, at a considerable distance from both base and side; elytra as wide as the prothorax, two-fifths longer than wide, gradually ogival posteriorly; striæ fine, feebly impressed, extremely finely punctulate by anteriorly oblique light, the scutellar very short, irregular; lateral series very narrowly interrupted; intervals broadly, just visibly convex. Length (♀) 5.5 mm.; width 2.6 mm. New York (Sheepshead Bay, Long Island),—Shoemaker.....**lyncea** n. sp.

Basal thoracic angles definitely and distinctly rounded.....12

12—Form oblong-oval, convex, polished, the elytra not definitely less so in the female, rufo-testaceous throughout, the femora slender; tarsi long and slender; head barely more than half as wide as the prothorax, with well developed prominent eyes and very small subpunctiform strioles; antennæ obscure ferruginous, clearer basally, much longer than the thoracic width; prothorax barely one-half wider than long, the sides broadly, feebly arcuate, slightly more so and more converging apically, almost parallel basally; basal angles only very narrowly rounded; apex over two-thirds as wide as the base, very faintly sinuate, with broadly rounded angles; impressions obsolete; punctures of the foveal regions basal, rather coarse, moderately numerous; inner fovea feeble but linear, the outer very small, feeble, the angular puncture small or moderate, slightly nearer base than side; elytra two-fifths longer than wide, not or scarcely wider than the prothorax, obtusely ogival in apical third; striæ rather fine but sharp, deep and slightly impressed, somewhat finely and closely punctate, the scutellar short and disintegrated, the lateral series

not interrupted; intervals evidently (♂), or very feebly (♀), convex. Length (♂ ♀) 4.8–5.75 mm.; width 2.3–2.6 mm. Two specimens from the Levette collection, probably collected in Indiana. One from the New Jersey seashore is apparently identical.

nugator n. sp.

Form very much as in *nugator* but rather more obscurely rufous, with longer prothorax, shorter head and different hind tarsi, the basal joint nearly as long as the next two together, while in *nugator* the second joint is normally elongate relatively, the second and third much longer than the first; surface polished; head distinctly more than half as wide as the prothorax, with large and prominent eyes and short feebly oblique strioles; antennæ ferruginous, slender, compressed as usual, extending far behind the thoracic base; prothorax less than one-half wider than long, the sides feebly arcuate, gradually more so and converging anteriorly; apex sinuato-truncate, nearly three-fourths as wide as the base, with broadly rounded angles; basal angles narrowly rounded; impressions subobsolete, the stria fine, feebly impressed; punctures of the foveal regions almost completely wanting, two or three in number in the type; inner fovea fine, feeble and linear, the outer small, rounded, almost obsolete; elytra two-fifths longer than wide, equal in width to the prothorax, gradually ogival behind; striæ rather fine but sharp, feebly impressed, with very small but evident, rather well separated punctures, the scutellar very short, oblique; lateral series narrowly interrupted. Length (♂) 5.3 mm.; width 2.2 mm. Virginia (Fortress Monroe).

curticeps n. sp.

Form oblong-oval, stouter and much larger than *nugator*, pale flavo-testaceous and shining throughout; sides of the metasternum and the met-episterna with a few coarsish punctures; head barely half as wide as the prothorax, with only moderately convex eyes, the strioles short, feeble and irregular; antennæ slender, ferruginous, barely longer than the thoracic width in the female; prothorax distinctly less than one-half wider than long, wider behind the middle than at base; sides subevenly arcuate, the obtuse basal angles rounded, with the coarse puncture very close to the angle; apex fully two-thirds as wide as the base, distinctly sinuate, with broadly blunt angles; impressions obsolete; punctures of the foveal regions rather coarse, few in number and in or near the inner fovea, which is feebly impressed and briefly sublinear, the outer a small punctiform indentation; elytra not much more than a third longer than wide, evenly rounded posteriorly, barely wider than the prothorax, with broadly arcuate sides; striæ coarse, sharply groove-like, with moderate but distinct punctures, the scutellar short, entire, widely free behind, the lateral series not definitely interrupted; intervals very feebly convex. Length (♀) 7.0 mm.; width 3.5 mm. Kansas.

haldemani n. sp.

Form notably elongate and parallel, convex, highly polished in both sexes, testaceous throughout; head barely more than half as wide as the prothorax, with prominent eyes and small, unevenly impressed strioles; antennæ ferruginous, much longer than the thoracic width;

prothorax scarcely more than two-fifths wider than long, more quadrate than usual, the sides broadly arcuate, more converging anteriorly, the basal angles broadly rounded; apex three-fourths as wide as the base, very feebly sinuate, with obtusely rounded angles; transverse impressions barely traceable, the stria fine but rather impressed; punctures of the foveal regions wide-spread, numerous and moderate in size; foveæ broadly and extremely feebly impressed, the outer distinctly the smaller and less linear; elytra nearly one-half longer than wide, exactly equal in width to the prothorax, rather rapidly ogival behind, the sides feebly arcuate, the lateral series not interrupted; striæ moderately fine, with small but strong, close-set punctures, deeply impressed (♂) or less so (♀), the scutellar moderate, entire, widely free at tip; intervals strongly convex (♂) or broadly and moderately (♀). Length (♂♀) 6.2–6.7 mm.; width 2.5–2.8 mm. New York (Long Island),—Shoemaker.

liquida n. sp.

13—Elytral striæ completely devoid of punctures. Elongate, subparallel, convex, polished, obscure testaceous, brighter beneath, the legs pale; elytra blackish; head nearly three-fifths as wide as the prothorax, with prominent eyes and deep linear oblique strioles; antennæ dark ferruginous, extending far behind the thoracic base; prothorax nearly one-half wider than long, the sides broadly arcuate, gradually slightly more converging anteriorly, the basal angles more than right and distinctly rounded; apex fully three-fourths as wide as the base, very feebly sinuate, with broadly blunt angles; impressions obsolete, the stria fine, not impressed; punctures of the foveal regions numerous, very moderate; foveæ broadly, moderately impressed, the inner broadly sublinear, the outer more rounded, close to the base; elytra two-fifths longer than wide, barely visibly wider than the prothorax, rapidly ogival in apical third, the sides feebly arcuate; striæ moderately fine but sharply groove-like, the scutellar entire and widely free at tip; lateral series narrowly interrupted; intervals very feebly convex; abdomen with a small discal impression near the side of each segment. Length (♂) 6.2 mm.; width 2.4 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend. . . . . ***chihuahuæ** n. sp.

Elytral striæ punctured. 14

14—Striæ finely and feebly punctate, the punctures only discoverable by close observation under anteriorly reflected light; Sonoran fauna. Body oblong-suboval, only moderately convex, polished throughout in both sexes and pale testaceous, the elytra very slightly more obscure; head small, with very prominent eyes, half as wide as the prothorax, the strioles feebly impressed and punctiform; antennæ moderate though extending behind the thoracic base, very pale ferruginous; prothorax one-half to three-fifths wider than long, the sides arcuately converging in anterior, parallel and nearly straight in about posterior, half, the basal angles barely more than right, narrowly rounded; apex not three-fourths as wide as the base, just visibly sinuate or subtruncate, with broadly rounded angles; impressions obsolete, the stria fine; punctures of the foveal regions very

numerous, moderately coarse; inner fovea linear, long, feebly impressed, the outer circular, small, deep and rather distant from the base; elytra two-fifths longer than wide, not evidently wider than the prothorax in either sex, rather gradually ogival behind; striæ rather fine, very feebly impressed, the scutellar short, free and irregular; lateral series not or narrowly interrupted; intervals broadly and feebly convex in both sexes, rather less in the female. Length (♂♀) 5.5–6.0 mm.; width 2.25–2.6 mm. Arizona (probably southern) ..... **pimalis** n. sp.

Striæ distinctly punctured; Atlantic faunal regions 15

15—Body narrowly elongate-oval, rather convex, polished in both sexes, piceo-testaceous, the head and pronotum more flavate; under surface and legs very pale rufous; integuments very thin and subhyaline; head small, scarcely over half as wide as the prothorax, with prominent eyes and short fine linear and oblique strioles; antennæ flavo-ferruginous, extending far behind the thoracic base; prothorax very nearly one-half wider than long, the sides broadly, feebly arcuate and slightly converging from near the base to the apex, which is almost three-fourths as wide as the base and feebly though evidently sinuate, the angles broadly blunt; basal angles obtuse and bluntly rounded at tip; impressions feeble, the stria very fine; punctures of the foveal regions strong but few in number, clustering about the inner fovea, which is broad, feeble and sublinear, the outer small, rounded, distant from the base; elytra not quite one-half longer than wide, about as wide as the prothorax, very gradually ogival from near the middle, the lateral series not interrupted; striæ fine, feebly impressed in the male, with the punctures fine, the scutellar very short, oblique; intervals slightly convex (♂), nearly flat (♀). Length (♂♀) 4.7–5.3 mm.; width 1.9–2.3 mm. New York (Long Island),—Ernest Shoemaker ..... **shoemakeri** n. sp.

Body less narrowly oblong-oval, convex, highly polished, bright rufous, the elytra feebly picescent; under surface rufous, the legs flavo-testaceous; head notably small, scarcely one-half as wide as the prothorax; eyes moderately prominent, the strioles linear and oblique; antennæ not very slender, flavo-ferruginous, barely longer than the thoracic width in the male; prothorax about two-fifths wider than long; sides broadly arcuate, gradually more so and converging anteriorly, the basal angles slightly obtuse and narrowly rounded, with the puncture deep and symmetrically included; apex not quite three-fourths as wide as the base, sinuato-truncate, with very broadly rounded angles; impressions obsolete, the stria very fine, slightly abbreviated; punctures of the foveal regions rather coarse, few in number, mostly near the inner fovea, which is very feeble, broadly sublinear, the outer small, rounded, punctiform, deeply impressed and remote from the base; elytra not quite one-half longer than wide, equal in width to the prothorax, gradually ogival posteriorly; striæ rather coarse, impressed, somewhat strongly and closely punctate, the scutellar very short, incomplete or disintegrated; lateral series widely separated but scarcely interrupted medially; intervals notably convex. Length (♂) 5.2 mm.; width 2.25 mm. New York

(Long Island),—Shoemaker. The original type, from Willets Point, Long Island, is apparently lost.....**pallida** Csy.

Body still stouter, oblong-oval and highly polished throughout in the female; general habitus and coloration almost exactly as in the preceding, but with larger head, much longer antennæ and feebler elytral striation; head rather more than half as wide as the prothorax, with very prominent eyes; antennæ (♀) rather stout and colored as in the preceding male, but very much longer, greatly exceeding the thoracic width, the individual joints longer; prothorax as in the preceding but three-fifths wider than long, the rounding sides more converging anteriorly, the foveal punctures smaller, and the outer fovea feebler and less punctiform; elytra two-fifths longer than wide, equal in width to the prothorax, gradually ogival behind, the striæ fine, just visibly impressed and very finely punctate, the scutellar short, free and imperfect as in the preceding, the lateral line of foveæ not interrupted; intervals much broader and nearly flat. Length (♀) 6.0 mm.; width 2.75 mm. New York (Long Island),—Shoemaker.....**politissima** n. sp.

16—Elytra micro-reticulate and alutaceous in the female, polished in the male.....17

Elytra smooth and highly polished in both sexes.....19

17—Elytral striæ virtually impunctate. Body oblong-suboval, convex, shining, piceous-black, the head and pronotum rufo-piceous, the under surface and legs rather bright rufous; head distinctly more than half as wide as the prothorax, the eyes well developed but only moderately convex, the strioles short, linear and oblique; antennæ ferruginous, extending only to the thoracic base in the female; prothorax fully three-fifths wider than long, the sides strongly rounded and converging in apical, straighter and parallel in basal, half; basal angles more than right but not evidently blunt; apex broad, rather more than three-fourths as wide as the base, broadly, rather evidently sinuate, with the angles moderately blunt; impressions barely traceable; punctures of the foveal region rather numerous and extending more finely entirely across, to almost completely obsolete; elytra barely more than a third longer than wide, scarcely visibly wider than the prothorax, with arcuate sides, gradually strongly arcuato-ogival behind; striæ fine, feebly impressed in the female and either completely punctureless or with very feeble and scarcely discoverable though evident punctulation, the scutellar rather long, entire, sometimes not free at tip; lateral series moderately interrupted; intervals broadly, feebly convex to nearly flat in the female; tarsi unusually short. Length (♀) 5.6 mm.; width 2.3–2.4 mm. Texas.....**texana** Putz.

Elytral stria rather strongly, crenately punctate; body more elongate.18

18—Form oblong, parallel, moderately convex, polished throughout in the male, the female elytra subopaque, dark castaneous, the under surface rufous, the legs flavo-rufous; head somewhat shorter than wide, nearly three-fifths as wide as the prothorax, with moderately prominent eyes; antennæ ferruginous, slender, extending slightly behind the thoracic base; prothorax a little less than one-half wider

than long, the sides parallel and feebly arcuate, more so and converging apically; apex fully three-fourths as wide as the base, feebly but evidently sinuate, with blunt angles; basal angles right and not rounded; impressions subobsolete; punctures of the foveal region numerous and close-set; inner fovea feeble, sublinear, the outer oval and feeble, but with the exterior surface rather elevated; elytra fully one-half longer than wide, parallel and slightly wider than the prothorax, very abruptly and obliquely rounded in apical third, the sutural angle well marked; striæ fine, slightly impressed (♂), not coarsely but strongly, rather distinctly punctate, crenating the intervals, especially in the female, the scutellar rather long, punctate; lateral series slightly interrupted; intervals broadly convex (♂), nearly flat (♀). Length (♂♀) 6.0–6.5 mm.; width 2.7–2.9 mm. New Mexico (Sta. Fé),—Mary W. Greene. [*Celia acutangula* Putz. (Horn)]..... **harpalina** Lec.

Form elongate, more oval than in the preceding, nearly similar in coloration and lustre, except that the head and prothorax are more rufescent; head large, fully three-fifths as wide as the prothorax, with prominent though moderate eyes and feeble, rather punctiform strioles; antennæ ferruginous, slender, with less than the usual compression, extending slightly behind the thoracic base; prothorax one-half wider than long, the sides broadly, feebly arcuate, gradually a little more so and very moderately converging anteriorly; apex sinuato-truncate, nearly four-fifths as wide as the base, the angles obtusely rounded; basal angles right, not definitely blunt; transverse impressions evident, the anterior feeble, the posterior very distinct; punctures of the foveal region numerous, coarser than in *harpalina;* inner fovea feeble, short, irregularly sublinear, the outer small, obliquely sublinear, with rather convex and prominent external surface; elytra not quite one-half longer than wide, evidently wider than the prothorax, with arcuate sides, very gradually arcuately ogival behind, the sutural angle not pronounced; striæ only moderately fine, groove-like, with not very coarse but deep, well separated punctures crenating the intervals, which are perfectly flat in the female; scutellar stria rather long, broadly free at tip; lateral series rather widely interrupted. Length (♀) 6.0 mm.; width 2.5 mm. Colorado (Akron),—H. L. Shantz.... **shantzi** n. sp.

19—Species of the average size in the present group.....20

Species notably small.....27

20—Form elongate, parallel, the head rather well developed.....21

Form shorter, oblong-oval, the head always notable small in size.....22

21—Color piceous-black, the head, pronotum and under surface piceo-rufous, the legs paler; head much more than half as wide as the prothorax, with moderate, rather prominent eyes and short strioles; antennæ ferruginous, rather slender, largely missing in the type; prothorax less than one-half wider than long, the sides broadly, subevenly arcuate, barely more so apically than basally; apex nearly three-fourths as wide as the base, feebly sinuate, with very broadly rounded angles; basal angles more than right, slightly blunt; basal impression evident, the apical obsolete; stria fine but broadly im-

pressed; punctures of the foveal region numerous, notably coarse and deep; inner fovea broadly, feebly impressed, the outer rounded, rather large, feebly impressed; elytra barely a third longer than wide, subevenly rounded behind the middle, equal in width to the prothorax; striæ coarse, impressed, coarsely, crenately punctate, the scutellar not long, coarse, free; intervals feebly convex; lateral series more widely spaced medially but not interrupted. Length (♀) 6.2 mm.; width 2.45 mm. New Jersey..... **lubrica** n. sp.

Color rufo-piceous, the legs barely paler; elytra and entire hind body beneath deep black; head nearly as in the preceding but still larger, longer than wide, the antennæ almost entirely missing in the type but ferruginous and slender; prothorax only two-fifths wider than long, parallel, the sides rounding and converging anteriorly; basal angles rather broadly rounded at tip; apex nearly three-fourths as wide as the base, broadly but distinctly sinuate, with bluntly rounded angles; both transverse impressions obsolete, the stria very fine; punctures of the foveal region moderately numerous and very coarse, the foveæ irregular and very feebly impressed; elytra fully two-fifths longer than wide, at the middle barely perceptibly wider than the prothorax, gradually arcuately ogival posteriorly, the sides arcuate, the surface highly polished in the female; striæ finely groove-like, not deep, scarcely at all impressed, the punctures minute and feeble; scutellar stria short, free; lateral series not interrupted; intervals very nearly flat; under surface unusually punctate, the first four abdominal segments with rather close lateral punctures, the metasternal sides and episterna with a few coarser punctures. Length (♀) 6.8 mm.; width 2.85 mm. New York (Willets Point, Long Island).
nigripennis n. sp.

22—Sides of the pronotum rather abruptly and strongly flattened broadly toward base, somewhat as in *terrestris*.....23

Sides of the pronotum not, or only very feebly or partially, flattened postero-laterally.....25

23—Head rather well developed, distinctly more than half as wide as the prothorax. Body stout, oblong-oval, moderately convex, piceous above and beneath, the legs pale-flavo-testaceous, the femora somewhat slender; head scarcely as long as wide, with large and moderately prominent eyes and short, very oblique strioles; antennæ rufo-ferruginous, not very slender, extending to the thoracic base in the female; prothorax fully one-half wider than long, somewhat inflated, the sides arcuate, scarcely more so, though more converging, apically; basal angles much more than right, slightly blunt; apex more than two-thirds as wide as the base, distinctly sinuate, with broadly rounded angles; impressions obsolete, the stria very fine; foveal punctures few in number and sparsely scattered, rather strong; foveæ feebly impressed and somewhat indefinite, the inner with a deeper impressed line; elytra two-fifths longer than wide, at the middle very slightly wider than the prothorax, rather rapidly rounded in about apical third; striæ fine but impressed, with very fine punctures, the scutellar moderate, oblique, widely free at tip; lateral

series very narrowly interrupted; intervals distinctly convex. Length (♀) 6.0 mm.; width 2.8 mm. Virginia (Fortress Monroe).

volatilis n. sp.

Head smaller, the body much smaller and less stout.....24

24—Form oblong-oval, convex, dark piceous, the prosternum and abdomen rufous, the legs flavo-rufous; head slightly more than half as wide as the prothorax, with moderately prominent eyes and well developed oblique strioles; antennæ rather short, extending barely to the thoracic base, obscure ferruginous, paler basally; prothorax shorter, three-fifths wider than long, the sides almost evenly arcuate from base to apex, the basal angles very obtuse and slightly blunt; apex three-fourths as wide as the base, feebly sinuate, with broadly rounded angles; impressions obsolete; stria fine but broadly and rather deeply impressed; foveal punctures few and clustered loosely at the inner fovea, which is broadly impressed, the outer small, more distinct, oval; elytra less than one-half longer than wide, barely wider than the prothorax, very gradually rounded behind the middle, the sides arcuate; striæ coarse, feebly impressed, rather coarsely and conspicuously, crenately punctate, the scutellar short, oblique, punctate, the lateral series scarcely or very narrowly interrupted; intervals distinctly convex; tarsi long and slender. Length (♀) 5.0 mm.; width 2.0 mm. Wisconsin.....**vegrandis** n. sp.

Form oblong-oval, moderately convex, deep black, the pronotum rufo-diaphanous at the sides posteriorly, the under surface more or less rufous, the legs rufous; head barely half as wide as the prothorax, with very prominent eyes and impressed strioles, rufescent at base; antennæ pale ferruginous, slender, extending far behind the thoracic base in the male; prothorax trapezoidal, not quite one-half wider than long, the sides evenly converging and evenly, moderately arcuate from base to apex; basal angles well rounded, the puncture much more distant from side than base; apex only two-thirds as wide as the base, very feebly sinuate, with broadly rounded angles; basal impression distinct, the apical vestigial, the stria fine, not impressed; punctures of the foveal area numerous, moderate in size, not extending to the sides; inner fovea broadly, feebly impressed, linear anteriorly, the outer small, almost obsolete; elytra one-half longer than wide, scarcely at all wider than the prothorax, rounded in about apical third; striæ fine, very feebly impressed, with rather fine and notably distant punctures, the scutellar fine, free, punctate, somewhat disintegrated; lateral series not clearly or but narrowly interrupted; intervals just visibly convex; tarsi long and slender as usual. Length (♂) 5.0 mm.; width 2.2 mm. Mississippi (Vicksburg).

fluminea n. sp.

25—Elytra rather abruptly and obliquely rounded at apex, with distinct though broad sutural angle and more coarsely punctate striæ. Body oblong, convex, polished, piceo-rufous, feebly ænescent, the last two abdominal segments and the legs pale flavo-rufous; head small, very slightly more than half as wide as the prothorax, with well developed prominent eyes and very short strioles; antennæ ferruginous, extending slightly behind the thoracic base; prothorax less than one-

half wider than long, the sides feebly arcuate, rounding inward at base and more broadly so and converging apically; basal angles obtuse and distinctly rounded; apex three-fourths as wide as the base, sinuato-truncate, with broadly blunt angles; impressions nearly obsolete, the stria fine but impressed; punctures of the foveal areas small, very few and irregularly scattered; foveæ broadly and very feebly impressed; elytra oblong, two-fifths longer than wide, barely at all wider than the prothorax, the long parallel sides virtually straight, rounding very gradually at base; striæ coarse, deeply impressed and with coarse crenulate punctuation, the scutellar short but coarse; lateral series subinterrupted; intervals convex. Length (♂) 5.0 mm.; width 2.1 mm. Minnesota (Duluth). A single example, taken by the writer..... **crenulata** n. sp.

Elytra gradually and arcuately narrowing behind, the punctures of the elytral striæ smaller, never very conspicuous.....26

26—Form moderately stout, oblong-oval, polished in both sexes, piceous-black, the pronotum sometimes feebly pallescent toward the sides; under surface piceo-rufous, the legs paler rufous; head very small, seldom distinctly more than half as wide as the prothorax, the eyes moderately prominent, more convex in some examples; antennæ ferruginous, extending well behind the thoracic base in the male, shorter (♀); prothorax more than one-half wider than long, the sides broadly, subevenly arcuate and slightly converging from base to apex, the basal angles right, only slightly rounded; apex very feebly sinuate, with bluntly rounded angles; impressions rarely evident, the stria distinct and almost entire; punctures of the foveal areas rather numerous to very few, moderate in size, the foveæ rather irregular and feebly impressed; elytra fully two-fifths longer than wide, just visibly wider than the prothorax, the sides feebly arcuate; striæ not very fine and somewhat impressed, finely to rather strongly punctate, the scutellar very short and often disintegrated; intervals more or less convex; hind tarsi long and very slender. Length (♂♀) 4.7–5.7 mm.; width 1.8–2.5 mm. New York to North Carolina, Lake Superior (Marquette and Duluth), Iowa and Kansas. Abundant. [*Am. contempta* Lec.]..... **musculus** Say

Form and coloration nearly similar but distinctly larger, the under surface paler, rufous, the legs more flavo-rufous; head larger, though but little more than half as wide as the prothorax, the eyes rather large and prominent; strioles short, more or less impressed; antennæ nearly as in *musculus;* prothorax fully three-fifths wider than long, the sides evenly and more strongly arcuate, the basal angles rounded at tip; apex similar; surface with greater tendency to postero-lateral flattening, the punctures of the foveal areas similarly numerous to almost wanting; the foveæ are feebly impressed, the inner broad to narrower and sublinear; elytra nearly one-half longer than wide, not (♂) or slightly (♀) wider than the prothorax; striæ very fine, not distinctly impressed, the punctures extremely fine and widely spaced, the scutellar short and very fine; lateral series not distinctly interrupted; intervals flat or very nearly; punctures of the under surface extremely few and not coarse; hind tarsi long and very

slender. Length (♂♀) 5.6–6.0 mm.; width 2.3–2.65 mm. Virginia (Fortress Monroe). Four examples.....**virginica** n. sp.

Form much shorter and relatively broader than in either of the two preceding, polished, piceous-black, the pronotum with a wide and rapidly basally broader testaceous lateral margin, due to diaphaneity; under surface rufo-piceous, the legs rather obscure rufous; head moderate, evidently more than half as wide as the prothorax and distinctly larger than in *musculus*, with rather large prominent eyes and moderate oblique strioles; antennæ long and slender, pale ferruginous, extending very far behind the thoracic base in the female; prothorax shorter, two-thirds wider than long, the sides subevenly arcuate, a little more converging anteriorly; basal angles rounded; apex scarcely three-fourths as wide as the base, feebly sinuate, with rounded angles; impressions subobsolete, the stria fine, subentire; punctures and foveæ nearly as in *musculus;* sides without any suggestion of posterior flattening; elytra much shorter, barely more than a third longer than wide and scarcely wider than the prothorax, arcuately narrowing behind the middle; striæ moderately fine, evidently impressed and having very fine punctures, the scutellar moderately long, free, entire and almost punctureless, the lateral series as in the two preceding; hind tarsi differing from those of either *musculus* or *virginica*, being distinctly shorter. Length (♀) 5.6 mm.; width 2.5 mm. North Carolina (Southern Pines). **limbalis** n. sp.

27—Basal thoracic angles right; hind tarsi long, very slender and filiform as usual.....28

Basal angles broadly obtuse; hind tarsi notably short and gradually tapering.....29

28—Body smaller and narrower than in *musculus* and with relatively much larger head, piceous, the anterior parts and under surface more rufous, the legs flavo-rufous; head fully three-fifths as wide as the prothorax, the eyes moderate in size and prominence, the strioles short, oblique, impressed; antennæ ferruginous, long but rather stout, extending far behind the thoracic base; prothorax scarcely more than a third wider than long, the sides broadly, feebly arcuate, more rounded apically; apex three-fourths as wide as the base, feebly sinuate, with broadly rounded angles; basal angles slightly blunt; impressions feeble, the stria very fine; punctures near the foveæ very few in number and moderate, the foveæ very feebly impressed, the inner rather long, irregularly sublinear; elytra nearly one-half longer than wide, very slightly wider than the prothorax, gradually rounding behind, the sides feebly arcuate; striæ rather coarse, feebly impressed, strongly and closely punctate, the scutellar very short, imperfect; lateral series very widely spaced medially; intervals distinctly convex. Length (♂) 4.7 mm.; width 1.9 mm. New York (Wading River, Long Island),—Schott.....**paulula** n. sp.

Body still smaller and narrower than in *paulula*, shining, black, the anterior parts piceous; under surface blackish-piceous, the legs bright rufous; head nearly three-fifths as wide as the prothorax, with rather

large and remarkably prominent eyes and very small but linear strioles; antennæ long, extending far behind the prothorax, slender on the uncompressed side, pale ferruginous; prothorax only a third wider than long, the sides very moderately, evenly converging from base to apex and feebly, evenly arcuate, only just visibly more converging apically; apex nearly four-fifths as wide as the base, very feebly sinuate or sinuato-truncate, with rounded angles; basal angles right, with the tips slightly blunt; basal impression feeble, the apical obsolete, the stria very fine; punctures virtually wanting, the foveæ so feeble as to be undefinable; postero-lateral parts evidently flattened; elytra not quite one-half longer than wide and very slightly wider than the prothorax, rather gradually rounding behind, the sides broadly arcuate; striæ very fine, feebly impressed, minutely and not closely punctulate, the scutellar long, oblique, not free posteriorly; lateral series not definitely interrupted; intervals feebly convex. Length (♂) 4.5 mm.; width 1.8 mm. Virginia (Fortress Monroe)..... **scintilla** n. sp.

29—Size smaller, the form, especially, shorter than in either of the two preceding, blackish, the anterior parts and under surface obscure, the legs brighter, rufous; surface polished in both sexes; head three-fifths as wide as the prothorax, with rather small and very prominent eyes, the ferruginous antennæ extending far behind the thoracic base in both sexes, though shorter in the female than in the male; prothorax much shorter than in the two preceding, one-half to nearly three-fifths wider than long, the apex fully three-fourths as wide as the base and barely visibly sinuate, with very broadly rounded angles; sides evenly rounded; basal angles very much more than right, though scarcely blunt; posterior impression feeble, the anterior obsolete, the stria very fine; foveal punctures small and extremely few or wanting, the inner fovea broadly impressed, sublinear, the outer very small, rounded and so feeble as to be almost invisible; surface sometimes but not always flattened postero-laterally; margin very finely reflexed; elytra a third to two-fifths longer than wide, slightly (♂) or much (♀) wider than the prothorax, somewhat rapidly ogival behind; striæ fine, feebly impressed, slightly punctulate, sometimes virtually impunctate, the scutellar notably short, oblique; lateral series narrowly interrupted; intervals distinctly though not strongly convex in both sexes. Length (♂ ♀) 3.9–4.4 mm.; width 1.7–2.0 mm. North Carolina (Southern Pines),—Manee. Three examples..... **brevitarsis** n. sp.

The species named *rubrica* by Haldeman, remains unknown, and I have seen nothing corresponding closely with the short diagnosis of the author; this is wholly insufficient to discriminate it among the numerous other pallid species, and the dimensions given by Haldeman—8 by 3 mm.—very greatly exceed those of any other species of this group known to me at present. I doubt also that the original type is still in existence. *Ferruginea* Csy., which was

united with *rubrica* by Horn, is apparently peculiar, not only in the absence of thoracic basal punctures, which character however is sometimes manifest individually in other species, but also in the small eyes and in the vestiture of the under surface of the anterior male tarsi, described as densely pubescent in two series; this vestiture usually consists of two rows of subelevated membranous plates. I have tried to identify the lost *pallida* Csy., from material very kindly sent me with that object in view by Schott and Shoemaker, but am very doubtful of the indentity of the form above described under that name. The eyes in this example seem to be larger, the antennæ just a bit longer and the general form of the body perceptibly narrower.*

The two specimens representing *texana* Putz., above described, hold together very well in general characters, but exhibit even unusual variability in some special characters, such as the punctuation of the pronotum and of the elytral striæ; the tarsi, microreticulation of the female elytra, general outline of the body and the coloration throughout are, however, virtually constant.

Celia acutangula Putz., was placed in synonymy with *harpalina* by Horn, but on reading the original description, I am almost convinced that this is a mistake, perhaps not quite so marked as the association of *pallida* with *subœnea*, but probable nevertheless. However, I have not seen anything that can strictly be identified as *acutangula* and so place the species under *harpalina*, though disclaiming any responsibility for this course.

The species near *musculus* Say, form a rather difficult study. *Virginica* is larger, with very fine and finely punctulate striæ and flat intervals; it also has a larger head and relatively larger eyes. *Limbalis* has shorter prothorax and elytra, larger head and shorter hind tarsi; the hind tarsi are much less abbreviated or tapering in *limbalis*, however, than they are in the comparatively minute *brevitarsis* from the same region. The three species *volatilis*, *fluminea* and *vegrandis*, separated because of the postero-lateral flattening of the pronotum, similar to that of the *terrestris* series, are distinct among themselves and quite different from *musculus*, but it should be remarked that this flattening has but little systematic value

* This, as well as about a dozen other unique types, including those of *Amara marylandica* and *ferruginea*, disappeared from my collection while temporarily at the Cambridge Museum many years ago, and I have never been able to trace them.

either here or in the *terrestris* group, because of its inconstancy; in less developed stages it is extremely difficult to recognize at all in some individuals, so that but little reliance should be placed upon that feature alone. I am by no means sure that the very small and narrower specimen, represented by the smaller measurements under *musculus*, really belongs to that species, and for a long time I had it separated under a different name; more specimens are desirable, however, before coming to a conclusion; this small specimen is from Marquette, where normal examples are abundant.

Throughout this group the apex of the last ventral segment has two setigerous pores at each side in the female and constantly but one in the male. The anterior tarsi of the male are only feebly dilated as a rule, and usually much less so than in *Amara*.

Amara Bon.

In the European fauna this genus and *Celia* are about equally well represented, but in that of North America it is far less numerous in species than *Celia;* at the same time, however, it apparently includes rather more species than are admitted in the European fauna, but whether or not this is an actual fact depends so much upon standards of taxonomic discrimination, that no useful comparisons can be made except through the study of both faunas by the same systematist. It should be remembered also that the European faunal region is only equivalent to that of North America east of the Rocky Mountains.

In the genus *Amara* care should be taken not to overestimate the importance of strial modifications, for there may be feeble though sensible punctulation in some individuals in which the striæ are normally wholly impunctate; in *basillaris*, however, the punctures are so conspicuous that I am disposed to make a separate group of that species. In the short table drawn up by Horn (Tr. Am. Ent. Soc., 1875, p. 127), the carination of the antennæ is made the primary taxonomic character, while in the treatment of Mr. Hayward (l. c., 1908, p. 49), it is the presence or absence of an ocellate subscutellar puncture which is given first importance; I am convinced that Mr. Hayward's conception is preferable. The carination of the third antennal joint is very obvious in some species, but in many others becomes so indefinite that group assignment becomes vir-

tually impossible under the Hornian system. I have therefore disregarded this character in defining groups. The name *Amara* would seem to imply that the lack of polished metallic lustre may be prevalent among the European species, but the decided reverse of this is true of our species, a large proportion of which are brilliantly æneous. I would suggest three groups for the North American fauna as follows:

Elytral striæ not or very feebly and indefinitely punctate.....2
Elytral striæ strongly punctate.....3
2—Prosternum of the male with a deep punctiform central fovea, somewhat as in *Celia californica;* body larger, more oblong; elytra without an ocellate subscutellar puncture; third antennal joint not carinate.....Group I (*insignis*)
Prosternum of the male not or very feebly modified; body more fusiform and smaller in size.....Group II (*impuncticollis*)
3—Prothorax shorter than in any other species, nearly twice as wide as long; antennæ not carinate; elytra without a subscutellar ocellate puncture; hind tibiæ of the male still more plentifully pubescent than in the other species.....Group III (*basillaris*)

Group III, founded upon *Amara basillaris* of Say, differs greatly from the other species of *Amara*, and the more abundant pubescence of the male hind tibiæ, as well as the short prothorax, would seem to indicate a peculiar and isolated type of this genus. The presence of distinct strial punctures is also a marked peculiarity. I have no representative of the species at present; it was said by Horn that *Amara marylandica* Csy., is nothing more than *basillaris*, but the whereabouts of the type of *marylandica* has been unknown to me for many years. The characters given above are taken from Hayward.

Group I

The species of this group are few in number and confined to the coast of California and to the neighboring islands, from Sta. Rosa to Guadalupe; so far as known to me they may be described as follows:

Body more narrowly oblong-oval, æneous, greenish or bluish in lustre. 2
Body stouter, more oval and more convex, the coloration never other than obscure æneous or bronzed; elytral striæ finer, with flatter intervals; antennæ pale ferrugineo-testaceous.....4
2—Lateral line of ocellate elytral punctures broadly and sharply interrupted; antennæ piceous except basally. Body oblong-oval, convex, shining, black, without obvious metallic lustre, the under sur-

face and femora black, the tibiæ and tarsi obscure rufous; elytra (♀) only feebly alutaceous; head scarcely more than half as wide as the prothorax, the eyes only moderately prominent, the strioles rather short, coarsely impressed, subparallel; antennæ piceous-black, the three basal joints obscure testaceous; prothorax three-fourths wider than long, the sides broadly arcuate, becoming parallel in about basal half; apex fully three-fourths as wide as the base; feebly sinuato-truncate, with bluntly rounded angles; basal angles right and only slightly blunt; base feebly sinuate at each side; impressions subobsolete, the stria moderate, much abbreviated; foveal area impunctate; inner fovea fine, feeble, long and linear, the outer linear, posteriorly oblique outwardly; elytra one-half longer than wide, at the middle distinctly wider than the prothorax, gradually convergently rounded behind the middle; striæ very fine, feebly subpunctulate laterally, the scutellar long, oblique, not free at tip; intervals broadly, feebly convex, the convexity especially feeble toward the sides; tarsi long, slender. Length (♀) 9.3 mm.; width 3.8 mm. California (San Clemente Island). . . . . **perspecta** n. sp.

Lateral series with the punctures more widely, irregularly spaced medially, but not definitely interrupted; antennæ ferruginous, sometimes very feebly infuscate, excepting the four basal joints. 3

3—Form rather stout, larger in size, shining, black, with æneous lustre, sometimes decidedly blue and rarely greenish; femora nearly black, the tibiæ and tarsi obscure rufous; head half as wide as the prothorax, with well developed but only moderately prominent eyes; prothorax three-fifths to two-thirds wider than long, the sides parallel, feebly arcuate, more so and converging anteriorly; apex broad, feebly sinuate, the angles blunt; basal angles much more than right though not rounded; margins abruptly and strongly but not broadly reflexed; impressions obsolete; foveal punctures numerous to almost wanting; inner fovea long, linear, the outer rounded, feebly impressed, distant from the base; elytra nearly one-half longer than wide, about equal in width to the prothorax, rapidly and broadly rounded behind; striæ not very fine, impunctate, groove-like, sometimes impressed, the scutellar long, oblique, narrowly free at tip and generally widely free at base; anterior tarsi very broadly dilated (♂); elytra (♀) feebly to densely alutaceous; under surface punctureless. Length (♂) 8.8–10.0, (♀) 9.8–11.0 mm.; width (♂) 3.75–4.3, (♀) 4.4–4.9 mm. California (middle coast regions). Said to occur also northwardly as far as Sitka, Alaska. [*Am. cærulea* and *compacta* Mots.]. . . . . **insignis** Dej.

Form narrower, the size notably smaller; coloration almost similar, except that the legs are uniformly rufous throughout and the antennæ very pale ferruginous; head slightly more than half as wide as the prothorax, the eyes rather more prominent than in *insignis;* prothorax almost similar throughout, except that it is relatively not quite so large; elytra fully one-half longer than wide, a little less (♀), more gradually ogival behind than in *insignis* and, at the middle of the more arcuate sides, very distinctly wider than the prothorax; striæ finer, impunctate, the scutellar very long, nearly as in *insignis;*

intervals not differing much, except in lustre, in the two sexes, but varying from perfectly flat to notably convex; hind tarsi long, rather stout in the male type, which has perfectly flat strial intervals, but distinctly more slender in all the other examples of both sexes. Length (♂) 8.0–9.5, (♀) 9.5–10.0 mm.; width (♂) 3.6–4.0, (♀) 4.3–4.4 mm. California (San Diego).....**tarsalis** n. sp.

4—Prothorax very slightly wider behind the middle than at base, stout, convex, rather shining, the elytra alutaceous in the female, black, with feeble obscure bronze lustre; under surface black, the legs and epipleura rufous; head well developed, rather more than half as wide as the prothorax, the eyes rather feebly convex; antennæ moderate in length; prothorax three-fifths wider than long, the sides subevenly and distinctly arcuate from the obtuse and somewhat blunt basal angles to the apex, which is broad, feebly sinuate and with broadly blunt angles; impressions obsolete or nearly so; foveal region usually punctureless, sometimes with a few fine feeble punctures at the inner fovea, which is distinct and linear, the outer small, rounded, sometimes nearly obsolete; elytra barely more than a third longer than wide, in the female, and slightly wider than the prothorax, broadly but somewhat gradually ogival behind; striæ fine but sharp, impunctate, the scutellar long, oblique; lateral series very remotely spaced medially; intervals flat, feebly convex on the declivity. Length (♀) 9.4–10.0 mm.; width 4.4–5.0 mm. California (Island of San Clemente). Six examples.....**insularis** Horn

Prothorax widest at base, with oblique and feebly, evenly arcuate sides thence to the apex; body rather less stout, similar in coloration and lustre, the elytra feebly alutaceous, the legs and epipleura more obscurely rufous; head and antennæ nearly similar, the former distinctly more than half as wide as the prothorax, the eyes only feebly convex; prothorax shorter and three-fourths wider than long; basal angles obtusely rounded; apex narrower and more sinuate, not quite three-fourths as wide as the base, the angles similarly blunt at apex; surface similar, the outer fovea more postero-laterally oblique; elytra narrower and more elongate, nearly one-half longer than wide in the female, otherwise almost similar in outline, less evidently wider than the prothorax; striæ still finer, extremely tenuous, almost obsolete externally and minutely broken or comminuted, the scutellar similar but much finer; lateral line of punctures broadly interrupted medially; intervals perfectly flat throughout, not differing on the declivity. Length (♀) 10.0 mm.; width 4.4 mm. California (Island of Guadalupe).....**guadalupensis** n. sp.

The remarkable variations observable, even with the limited material at hand, in the *insignis* group, would seem to imply a mixture of some closely allied forms, and perhaps the names of Motschulsky will prove to be valid, subspecifically at least. The females of *insignis* may have sensibly convex and rather shining to perfectly flat and subopaque intervals, and, although when present

the pronotal punctures are confined to the foveal region, in one specimen they are extended forward broadly and loosely near the sides to the apex; generally there is no trace of this singular character. The male type of *tarsalis* differs from all the other San Diego males in its larger size, more elongate form, thicker tarsi and perfectly flat strial intervals.

Group II

This group includes virtually all of our species, only *basillaris* and the small preceding group being incompatible. They are extremely difficult to define in such a way as to be surely identifiable, especially in view of their considerable number, but so far as I am able to determine, they may be separated by the following characters:

Elytra with an ocellate subscutellar puncture, forming the anterior end of the scutellar stria.....2

Elytra without trace of an ocellate subscutellar puncture.....11

2—Sides of the prothorax evenly converging and very evenly arcuate from base to apex; third antennal joint without distinct carina.....3

Sides always more rounding and convergent apically than basally; third antennal joint with more or less evident subbasal carination.....5

3—Antennæ (♀) notably stout, piceous, slender and pale basally. Form regularly oblong-oval, convex, shining, with pronounced bronzy-æneous lustre; elytra not distinctly alutaceous in the female, though less polished; under surface and epipleura obscure rufous, the metasternum, its episterna, and the abdomen, deep black; legs obscure rufous, the femora blackish; head distinctly less than half as wide as the prothorax, the eyes well developed but only slightly prominent; antennæ much shorter than the thoracic width; prothorax one-half wider than long, the apex sinuate, with moderately blunt angles, four-sevenths as wide as the base; evenly converging sides rather strongly, evenly arcuate; foveæ impunctate, the inner linear but very feeble, the outer rounded, feebly impressed, far from the sides and nearly as far from the base; basal angles right, narrowly rounded, the puncture much further from side than base; elytra two-fifths longer than wide, as wide as the prothorax, gradually ogival from about the middle; striæ rather fine, impressed suturally, strongly toward tip, impunctate, the scutellar oblique, free or not behind; lateral series not interrupted; intervals, except apically, nearly flat. Length (♀) 8.0 mm.; width 3.5 mm. New York (Willets Point, Long Island).....**arcuata** n. sp.

Antennæ very slender in both sexes and much less compressed, about as long as the thoracic width; converging sides of the prothorax from base to apex very feebly but evenly arcuate.....4

4—Body smaller, more narrowly oval, the subapical sinus of the elytra shallow and inconspicuous; color black, but usually with moderate æneous lustre, black beneath and somewhat greenish; legs dark

rufous, with blackish femora; head nearly as in the preceding, the longer and more slender antennæ piceous, the three basal joints and nearly half of the fourth pale testaceous; prothorax less transverse, two-fifths wider than long or less; apex three-fifths as wide as the base, deeply sinuate, with prominent and well defined, apically very narrowly blunt angles; surface nearly as in the preceding but with still more nearly obsolete foveæ; elytra one-half longer than wide, as wide as the prothorax, gradually ogival behind the middle; striæ fine, coarse and groove-like posteriorly, the seventh very feeble, the scutellar oblique, variable; lateral line of punctures not interrupted; intervals very nearly flat throughout the length. Length (♂♀) 6.7–7.8 mm.; width 2.8–3.4 mm. New York, Maryland and Virginia. [*Am. anthracina* Hald.]..... **impuncticollis** Say

Body larger, less narrowly oval, with the subapical sinus of the elytra more abruptly formed, deeper and more conspicuous; coloration similar, except that the surface lustre, though shining, is not metallic to any obvious degree; head a little larger, otherwise similar; prothorax somewhat more elongate; elytra rather more obtuse behind, the striation similar. Length (♀) 8.5 mm.; width 3.8 mm. Mississippi (Vicksburg)..... **difficilis** Lec.

5—Elytra very gradually narrowed behind and feebly, subevenly arcuate from before the middle to the acute apex, the apical part of the disk very gradually declivous. Elongate-oval, convex, rather shining, deep black, without metallic lustre above, greenish-metallic beneath; legs dark rufous, the femora black; head almost half as wide as the thoracic base, a little narrower than the apex as usual; eyes moderately convex; antennæ rather long, piceous-black, the first three joints and base of the fourth bright testaceous; prothorax widest at base, not quite one-half wider than long; apex three-fifths as wide as the base, very deeply sinuate, with prominent angles; sides only slightly more arcuate and converging anteriorly; surface nearly smooth, the stria fine; foveæ feeble, impunctate, the inner linear, the outer oval, oblique; basal angles right, barely at all blunt, the puncture a little nearer base than side; margins finely but strongly reflexed; elytra slightly more than one-half longer than wide, submedially just visibly wider than the prothorax, the sides more gradually oblique and feebly arcuate posteriorly than in any other species, the sinus rather shallow; striæ fine, impunctate, only a little coarser apically; intervals nearly flat throughout but feebly convex near the apex. Length (♀) 9.0 mm.; width 3.8 mm. New Mexico (Sta. Fé),—Cockerell..... **acuminata** n. sp.

Elytra more rapidly and less acutely rounding behind as in *fallax*, the apical declivity steeper..... 6

6—Larger species, somewhat as in *fallax*..... 7

Smaller species, seldom much over 7 mm. in length..... 8

7—Form rather stout, oblong-oval, moderately convex and shining, the elytra sericeous in the female, black, with feeble bronze or greenish lustre, black beneath, the legs black throughout or partially piceous-black; head slightly less than half as wide as the prothorax, narrower than the thoracic apex, the eyes large and rather strongly convex;

antennæ as long as the thoracic width, black, the first three and one-half joints bright testaceous; prothorax one-half to nearly three-fifths wider than long, the sides broadly rounding before the middle; sometimes subparallel basally; apex four-sevenths as wide as the base, deeply sinuate, with prominent angles; foveæ impunctate, indefinite, a small discal lineiform incisure sometimes representing the inner; basal angles right; elytra one-half longer than wide, barely at all wider than the prothorax; striæ fine, very feebly impressed, coarser and deeper on the declivity, impunctate; punctures of the lateral series very remote and irregularly spaced medially. Length (♂♀) 8.7–9.5 mm.; width 3.8–3.9 mm. California (Los Angeles and San Francisco).....**mystica** n. sp.

Form oblong-oval, rather convex, shining, the elytra sericeous in the female; upper surface with bronzy-æneous lustre; under surface black, the legs rufo-piceous or blackish, the femora always black; head and antennæ nearly as in the preceding, the former slightly smaller, much less than half as wide as the prothorax, the latter similar in almost all respects, except that the apex is less deeply sinuate; elytra almost similar but still a little more elongate, fully one-half longer than wide, with the surface in the female more densely subopaque and the elytral striæ finer and feebler, similarly impunctate, the intervals perfectly flat as a rule, and not very slightly convex as they are in the preceding; striæ similarly coarser, with more convex intervals on the posterior declivity. Length (♂♀) 8.0–9.3 mm.; width 3.5–3.9 mm. Ontario to North Carolina, New Hampshire, Iowa and Lake Superior to Colorado (Boulder Co.). Abundant.....**fallax** Lec.

Form rather more narrowly oblong-oval than in *fallax* and smaller in size; color and lustre almost similar, the female elytra rather less opaculate; head subsimilar, much less than half as wide as the prothorax, the antennæ rather longer; prothorax nearly similar but rather less transverse and more deeply sinuate at apex, with more prominent apical angles; elytra similar in general appearance and relationship with the anterior parts, but evidently still more elongate, often more than one-half longer than wide; striæ not quite so fine, the intervals very feebly convex. Length (♂♀) 7.7–8.7 mm.; width 3.2–3.7 mm. California (Humboldt to Los Angeles), Nevada (Reno), Idaho (Cœur d'Alene), Utah (Provo) and New Mexico (Fort Wingate). Very abundant, representing *fallax* in the western regions.....**hesperia** n. sp.

8—Legs black; body narrow and elongate. Black with æneo-cupreous lustre above, the under surface black; tibiæ and stout tarsal setæ fulvous; head fully half as wide as the prothorax, the eyes rather large and prominent; antennæ black, the three basal joints bright testaceous, subequal in the sexes, rather stout, extending scarcely beyond the thoracic base; prothorax nearly three-fifths wider than long and only a little more than a third as long as the elytra, the sides broadly arcuate, converging in about apical, subparallel in basal, half; apex two-thirds as wide as the base, rather deeply sinuate, with prominent, bluntly pointed angles; basal angles right,

not rounded, the puncture symmetrically close to the angulation; surface completely impunctate, with very fine stria; inner fovea very feeble, linear, short and remote from the base, the outer wholly obsolete; elytra one-half longer than wide, barely at all wider than the prothorax, gradually but not narrowly ogival behind, the parallel sides broadly arcuate, the lateral series not interrupted; striæ fine, feebly impressed, impunctate, the seventh as distinct as the others, the scutellar very long; intervals feebly but distinctly convex. Length (♂ ♀) 6.7–6.8 mm.; width 2.7–2.8 mm. British Columbia (Inverness),—J. H. Keen.....**keeni** n. sp.

Legs very obscure rufous or piceous as a rule, generally with black femora.. 9

9—Body rather broadly oblong-suboval and moderately convex, black, with greenish or cupreo-æneous lustre, the elytra barely visibly alutaceous or less shining in the female; under surface greenish-black; head very nearly half as wide as the prothorax, the eyes rather large but not very convex; strioles well developed, oblique; antennæ long, rather slender, extending well behind the thoracic base, blackish, the first three joints and base of the fourth pale testaceous; prothorax only two-fifths wider than long, the sides feebly converging and nearly straight to beyond the middle, thence rounding and converging to the apex, which is two-thirds as wide as the base and rather deeply sinuate, with obtusely prominent angles; basal angles right, the puncture but little further from side than base; impressions subobsolete; stria fine but impressed and distinct, the surface impunctate; foveæ broadly impressed, the inner linear, its own length from the base, the outer extremely feeble, oblique, sometimes obsolete; elytra one-half (♂) to two-fifths (♀) longer than wide, gradually rounding behind the middle, very slightly wider than the prothorax; striæ fine, impunctate, scarcely impressed, the scutellar very moderate; intervals not quite flat. Length (♂ ♀) 6.8–7.6 mm.; width 3.2–3.35 mm. Lake Superior (Marquette and Bayfield). Six specimens.....**lacustrina** n. sp.

Body almost similarly broad and oblong-suboval, the male shining, greenish-metallic in lustre; elytra micro-reticulate but shining; under surface shining, greenish-black; legs black, the tibiæ dark rufous; head small, not quite half as wide as the prothorax; eyes prominent, the strioles linear and oblique; antennæ in great part missing in the type but pale testaceous basally; prothorax transverse, fully one-half wider than long, the arcuate sides gradually nearly straight and subparallel posteriorly; apex deeply and evenly sinuate, only two-thirds as wide as the base, the prominent angles very narrowly blunt at tip; basal angles right, not rounded, the puncture close to both base and side but not in the extreme apex of the angle; transverse impressions evident but feeble, the stria distinct in a broad feeble impression; foveæ subobsolete and altogether indefinite, the short coarse incised dash of the inner distinct; elytra one-half longer than wide, just visibly wider than the prothorax and gradually ogivally rounded behind from near the middle; striæ fine, impunctate, very slightly coarser on the declivity, the scutellar oblique, not free; in-

tervals flat; lateral series widely spaced medially but not interrupted. Length (♂) 7.2 mm.; width 3.1 mm. Colorado (Boulder Co.),—L. W. Casey.....**laurana** n. sp.

Body notably narrow, elongate-suboval and convex.....10

10—Legs obscure rufous throughout, only the anterior femora black; surface highly polished, very bright æneous above, greenish-black beneath; head rather distinctly less than half as wide as the prothorax, the eyes somewhat prominent; antennæ slender, fusco-testaceous, the three basal joints clearer; prothorax slightly less than one-half wider than long, rather widest at base, the sides broadly, subevenly arcuate, somewhat more converging apically; apex two-thirds as wide as the base, very deeply sinuate; basal angles right, not rounded, the puncture but little nearer base than side; impressions feeble but traceable; stria very fine; foveæ completely impunctate and subobsolete, the inner traceable as a short discal line; elytra equal in width to the prothorax, very evenly and gradually ogival in posterior half; striæ fine, impunctate, sharp, not at all impressed, the scutellar long; lateral series not interrupted; intervals perfectly flat; striæ coarse on the declivity. Length (♂) 6.7 mm.; width 2.8 mm. Minnesota (Duluth).....**otiosa** n. sp.

Legs piceo-rufous, all the femora black; surface shining, the elytra barely less so in the female, cupreo-æneous; under surface black, with greenish lustre; head rather well developed, somewhat more than half as wide as the prothorax, with rather prominent eyes; antennæ slender, extending about to the thoracic base, black, the first three joints and base of the fourth pale testaceous; prothorax only a third wider than long, the sides nearly straight and subparallel, gradually rounding and converging before the middle; basal angles right, not rounded, the puncture close to the base and barely further from the side; apex two-thirds as wide as the base, only moderately sinuate, with broadly rounded angles; impressions feeble, the stria very fine; foveæ impunctate, indefinite, the inner broadly impressed and very shallow, the outer small and obsolescent; elytra fully one-half longer than wide, longer than in the male of *otiosa*, fully as wide as the prothorax, very gradually ogival posteriorly; striæ fine, barely at all impressed, finely, closely, irregularly and very indistinctly punctulate, slightly coarser apically, the scutellar moderate; lateral series narrowly interrupted; intervals almost flat. Length (♀) 6.9 mm.; width 3.0 mm. Utah (Provo),—Wickham.....**provoana** n. sp.

11—Pronotum with the foveal region punctured at least to some extent; posterior thoracic puncture very close to the angle.....12

Pronotum impunctate throughout, except rarely and in a peculiar manner in the *polita* section, where the thoracic foveæ are deep.....14

12—Outer fovea bordered externally by a short but rather prominent ridge, not attaining the base; entire foveal region very finely, rather closely punctured. Body elongate-suboval, convex, polished, the elytra strongly shining in the female, black, with scarcely visible bronzy lustre, the under surface piceo-rufous, the legs dark rufous throughout; head well developed, evidently more than half as wide as the prothorax, the eyes rather large and prominent; strioles deep

and oblique; antennæ moderate, black, the first three joints testaceous; prothorax with the sides subparallel and feebly arcuate, gradually more so and converging anteriorly; apex two-thirds as wide as the base, distinctly though not deeply sinuate, the angles not much advanced and obtusely blunt; basal angles right, not rounded; impressions feeble, the anterior distant from the apex; stria very fine; inner fovea extremely shallow but with a long fine incised line, the outer small, oval, feebly impressed; elytra fully one-half longer than wide, gradually obtusely ogival behind, just visibly wider than the prothorax, the sides feebly arcuate, the lateral series rather widely interrupted; striæ fine but sharp and deep, impunctate, the scutellar rather long, deep and oblique; seventh stria distinct, finely comminuted; intervals not quite flat, not more convex and with the striæ not much coarser on the declivity. Length (♀) 7.3 mm.; width 3.0 mm. California (near San Francisco),—Dunn. . . . **vigilax** n. sp.

Outer fovea with the surface exterior thereto not at all prominent; anterior male tarsi feebly dilated. 13

13—Punctures of the foveal region very minute and sparsely scattered almost throughout; elytral striæ distinctly punctulate; body rather narrowly oblong-oval, convex, polished, greenish-black; under surface black, the legs piceo-rufous; head rather large, with prominent eyes, almost three-fifths as wide as the prothorax, the strioles impressed within, almost parallel; antennæ slender, scarcely extending to the thoracic base, piceous, the first three joints testaceous; prothorax barely a third wider than long, the sides very feebly converging and slightly arcuate, gradually more rounding and convergent anteriorly; apex three-fourths as wide as the base, extremely feebly sinuate, with broadly rounded angles, the basal right, not rounded; impressions obsolete, the stria very fine; inner fovea linear, oblique, sharply incised, the outer small, impressed, punctiform and distant from the base; elytra only just visibly wider than the prothorax, very nearly one-half longer than wide, gradually obtusely ogival behind, the sides broadly arcuate; lateral series coarse and close-set, sharply interrupted submedially; striæ rather fine but sharply deep and with feeble but distinct punctulation, which is less evident suturally than externally, the seventh a row of distinct punctures, the scutellar moderately long, oblique; intervals not quite flat, similar throughout. Length (♂) 6.0 mm.; width 2.4 mm. California (southern),—Dunn. . . . . **pomona** n. sp.

Punctures of the foveal region fine and sparse, generally only visible in and near the inner fovea; elytral striæ with excessively minute and close-set though rather clear punctulation; body elongate-suboval, moderately convex, black, polished, with very feeble greenish lustre, the elytra (♀) but little less shining; under surface black to rufescent, the legs pale rufous; head not distinctly more and sometimes less than half as wide as the prothorax, the eyes large but only moderately convex, the strioles rather long, fine and oblique; antennæ slender, not very long, piceous, the three basal joints and some of the fourth testaceous; prothorax nearly one-half wider than long, the sides distinctly converging from the base and feebly arcuate, very

gradually slightly more arcuate and a little more converging anteriorly; apex two-thirds as wide as the base, rather deeply sinuate, the prominent angles only narrowly obtuse at tip; basal angles right, not rounded; impressions feeble to obsolescent, the stria very fine; inner fovea broad and extremely shallow, with a short fine incised linear part, the outer minute and punctiform to wholly obsolete; elytra in outline and proportion nearly as in the preceding; lateral series finer and more narrowly, less sharply interrupted; striæ very fine, coarser and close on the declivity, feebly impressed in the male, the seventh very feeble, the scutellar rather long, fine, oblique; intervals feebly convex (♂), flat (♀); tarsi slender, blackish. Length (♂♀) 5.7–6.3 mm.; width 2.2–2.7 mm. Rhode Island (Boston Neck) and Long Island (Huntington and Wyandanch),—Schott. **humilis** n. sp.

14—Posterior thoracic puncture very much further from the side than from the base.....15

Posterior puncture almost symmetrically placed in the basal angle, sometimes slightly further from the side than from the base, extremely close to the tip of the angle in *polita* and allied species.....20

15—Antennæ blackish, with the first three joints testaceous.....16

Antennæ similar but with only one or two basal joints testaceous; legs always black throughout.....17

16—Form rather narrowly oblong-oval, convex, shining, the elytra a little less so in the female, deep black, without metallic lustre; under surface and legs black; head rather well developed, fully half as wide as the prothorax and with but moderately convex eyes and simple oblique strioles; antennæ moderate in length; prothorax one-half (♂) to three-fifths (♀) wider than long, widest slightly before the base, the sides broadly arcuate, gradually a little more so and converging anteriorly, almost evenly and more moderately arcuate throughout in the male; basal angles more than right and narrowly rounded, the puncture coarse and deep, perforate; apex two-fifths to two-thirds as wide as the base, deeply sinuate, with rather prominent angles; base feebly sinuate toward each side; impressions obsolete, the stria fine; foveæ very feebly impressed, sometimes obsolete, excepting the short incised line of the inner; elytra equal in width to the prothorax, one-half longer than wide to somewhat less and gradually rounded behind, the sides very feebly arcuate; lateral series widely spaced medially; striæ very fine, slightly coarser on the declivity, not definitely punctured, though sometimes extremely minutely comminuted, the scutellar long, very fine; intervals flat in both sexes; anterior tarsi broadly dilated in the male. Length (♂♀) 6.7–7.2 mm.; width 2.8–3.0 mm. Colorado. Levette collection. Three specimens.....**tenax** n. sp.

Form more broadly oblong-oval, larger in size, black, usually with decidedly bright cupreo-æneous lustre above; under surface when mature black, the legs rufo-piceous, with black femora; head slightly less than half as wide as the prothorax; thoracic sides converging and feebly arcuate from base to apex, but little more so apically; basal angles right and narrowly rounded, the puncture between two

and three times as far from side as base; apex barely two-thirds as wide as the base, deeply sinuate, with very prominent though more or less bluntly pointed angles; impressions very feeble, the stria fine; foveæ almost completely obsolete, excepting the short incised line of the inner; elytra about equal in width to the prothorax, gradually ogival behind the middle; lateral series remotely spaced medially but not sharply interrupted; striæ fine, sometimes irregularly comminuted, with the seventh subobliterated, a little coarser on the declivity, the scutellar moderate or long, fine; intervals almost flat; anterior tarsi of the male moderately dilated. Length (♂♀) 7.0–7.8 mm.; width 3.0–3.35 mm. North Carolina (Southern Pines) to Illinois, Iowa (Keokuk) and Missouri (St. Louis) ..... **cupreolata** Putz.

17—Basal thoracic angles rounded 18

Basal angles right, not rounded 19

18—Form oblong-suboval, moderately convex, deep black, the upper surface with rather bright bronze lustre; head about half as wide as the prothorax; eyes moderately prominent, the strioles short, broadly impressed; antennæ slender, extending nearly to the thoracic base, black, with the first joint dark rufous, the second piceous; prothorax slightly over one-half wider than long, the sides very evenly and moderately arcuate, becoming nearly parallel basally; apex nearly three-fourths as wide as the base, distinctly and evenly sinuate, the angles blunt at tip; impressions subobsolete, the stria not coarse but impressed and very distinct; inner fovea marked by a short incised line, the outer a small rounded feeble impression, remote from both side and base; posterior puncture at the basal margin, twice its diameter from the side; elytra scarcely distinctly wider than the prothorax, nearly one-half longer than wide, very gradually rounded from the middle; surface (♀) somewhat shining though distinctly micro-reticulate; striæ very fine, especially toward the sides, where they are minutely subcomminuted, but little coarser on the declivity, the scutellar moderate, oblique; intervals flat. Length (♀) 7.0 mm.; width 3.0 mm. North Carolina (Southern Pines),—Manee ..... **rustica** n. sp.

Form more narrowly oblong-suboval, convex, shining, the elytra but little less so in the female; color deep black throughout the upper surface, without trace of metallic lustre; head well developed, evidently more than half as wide as the prothorax, the eyes moderately prominent, the strioles extremely small and fine; antennæ extending about to the thoracic base, black, the basal joint rufous, clouded with piceous above, the second piceous; prothorax fully one-half wider than long, the sides broadly, not evenly arcuate, more so anteriorly, subparallel and less so in about basal half; basal angles right but well rounded; sides of the base broadly sinuate; posterior puncture coarse and deep, twice as far from side as from base; apex barely two-thirds as wide as the base, deeply sinuate, the angles bluntly rounded at tip; impressions obsolete, the stria feebly impressed, distinct; inner fovea broadly, feebly impressed, with a short anterior incised line, the outer small, rounded, subobsolete; elytra

nearly one-half longer than wide, barely as wide as the prothorax, more rapidly rounding in apical two-fifths, broadly ogival at tip; striæ fine but well impressed, minutely subcomminuted, the scutellar short, oblique, deeply impressed; intervals broadly but evidently convex. Length (♀) 6.5 mm.; width 2.78 mm. Michigan (Marquette),—Sherman..... **marquettensis** n. sp.

Form oblong-oval, slightly more abbreviated than in the preceding, deep black, the upper surface bright polished bronzy-æneous; head not quite so large, barely half as wide as the prothorax, the eyes feebly convex, the very small linear strioles and the antennæ throughout nearly similar; prothorax rather more than one-half wider than long, the sides more evenly arcuate, rounding in basally, the basal angles more obtuse as well as rounded, the puncture not so coarse or deep, the remainder nearly as in the preceding, except that the base is not so evidently sinuate laterally; elytra shorter but otherwise nearly similar in outline, barely as wide as the prothorax; striæ finer, feebly comminuted in part, the scutellar moderate, not so oblique, very fine, not impressed and much disintegrated; intervals flat; middle tibiæ of the male serrate within, slightly bent. Length (♂) 6.2 mm.; width 2.65 mm. Michigan (Marquette),—Sherman.

æneopolita n. sp.

19—Body oblong-suboval, rather broad, convex, black, the upper surface more or less distinctly bronzed; legs piceous-black, the femora blacker; head half as wide as the prothorax, the eyes rather feebly convex, the strioles moderate, oblique; antennæ rather short, not extending to the thoracic base, black, the two basal joints rufous, clouded above with blackish; prothorax one-half wider than long, the sides broadly arcuate, more so and converging anteriorly, subparallel basally, the basal angles right, slightly blunt because of a feeble arcuation of the base outside of the broad feeble sinuses, the puncture moderate, twice as far from side as from base; apex two-thirds as wide as the base, deeply sinuate, the angles blunt at tip; impressions very feeble; inner fovea obsolete, excepting the short incised line, the outer oblique but very feeble; elytra not quite one-half longer than wide, about as wide as the prothorax, gradually rounding behind; striæ fine, minutely subpunctulate or comminuted, the scutellar long, oblique; intervals flat or nearly so. Length (♂♀) 6.0–7.0 mm.; width 2.8–3.1 mm. Nebraska. Four examples.

nebraskana n. sp.

Body nearly as in *nebraskana* but more elongate and smoother, bright bronze above; legs black, with rufescent tibiæ; head relatively a little smaller, not quite half as wide as the prothorax, the eyes slightly more convex; antennæ similar in coloration but somewhat longer and more slender, extending to the thoracic base; prothorax broader, three-fifths wider than long, otherwise very nearly as in the preceding; elytra longer, fully one-half longer than wide, similar in general form and relationship, the lateral series more broadly interrupted, although in this part of the section the interruption is not very constant in extent; in the type of the present species there is a broad sharp interruption on the left elytron, while a single puncture lies

at the middle of the equally wide interval on the right elytron; striæ nearly as in the preceding, the long scutellar more disintegrated, the striæ similarly but slightly coarser on the declivity; intervals virtually flat; middle tibiæ of the male a little longer and less bent. Length (♂) 7.3 mm.; width 3.1 mm. Colorado (Boulder Co.).

oblongula n sp.

20—Antennæ dark, with the three basal joints testaceous.....21

Antennæ similarly dark, with the first two joints at least in part testaceous.....30

21—Posterior thoracic puncture larger, well separated from both side and base; thoracic foveæ generally feeble.....22

Posterior puncture small and extremely close to the apex of the basal angle; species small and usually æneous; thoracic foveæ both deep and conspicuous, the outer oblique postero-laterally.....26

22—Head well developed, always fully half as wide as the prothorax and sometimes wider.....23

Head notably small, not or barely half as wide as the prothorax.....24

23—Form stout, oblong, rather convex, black, shining, the male with very feeble bronzy lustre; micro-reticulation of the elytra strong in both sexes, but rather finer and denser on the strongly alutaceous elytra of the female; under surface and legs black; head notably large, more than half as wide as the prothorax, the eyes moderately convex, strioles short but coarse and deep; antennæ long, extending somewhat behind the thoracic base; prothorax one-half wider than long, with the sides strongly rounding and converging anteriorly, straighter and parallel posteriorly; basal angles right, the puncture very coarse and deep, slightly nearer base than side; base broadly sinuate laterally, arcuate near the angles; apex almost three-fourths as wide as the base, deeply sinuate, with prominent but bluntly pointed angles; impressions subobsolete, the stria distinct; foveæ very feeble, the inner short, rectilinear, the outer very feeble, oblique; elytra only two-fifths longer than wide, about as wide as the prothorax, rapidly and obtusely ogival behind; lateral series widely spaced but not interrupted medially; striæ fine but sharp, impunctate, only slightly coarser on the declivity, the scutellar long, oblique, entire; intervals virtually flat, just visibly more than flat in the male, not more convex apically. Length (♂♀) 9.0–10.0 mm.; width 3.7–4.1 mm. California (San Francisco). Abundant.

conflata Lec.

Form less stout, oblong and much smaller in size, similarly deep black throughout, the male highly polished and very feebly bronzed, the female elytra alutaceous but less opaculate than in *conflata;* head large, evidently more than half as wide as the prothorax, the eyes rather convex; antennæ a little shorter than in the preceding but otherwise nearly similar; prothorax one-half or more wider than long, the sides converging and broadly arcuate in about anterior half, thence parallel and straighter to the base, the posterior puncture very nearly at equal distance from side and base, the other features nearly as in *conflata;* elytra almost one-half (♂), two-fifths (♀),

longer than wide, equal in width to the prothorax, rather obtusely rounded behind; striæ strong and impressed (♂), less coarse and unimpressed (♀), distinctly coarser on the declivity, the scutellar moderate, oblique; intervals convex (♂), especially toward the sides, or flat (♀). Length (♂ ♀) 7.6–8.5 mm.; width 3.2–3.6 mm. California (near San Francisco). Four examples.....**diffidens** n. sp.

Form narrower than in *conflata* and smaller in size, elongate-suboval, convex, deep black throughout and shining, the female elytra feebly alutaceous; micro-reticulation of the male elytra almost obliterated; head not so large as in the two preceding, but fully half as wide as the prothorax, the eyes rather prominent; strioles coarse, deep and oblique; antennæ piceous, the two basal joints bright testaceous, the third feebly clouded apically, moderate in length; prothorax two-fifths to one-half wider than long, the sides differing from those of the two preceding in being almost evenly and moderately arcuate from base to apex, gradually subparallel basally, the posterior puncture coarse, very slightly nearer base than side; apex and general surface as in the preceding, the inner fovea a fine incised line, the outer sublinear but feeble and postero-laterally oblique, sometimes wholly obsolete; elytra fully one-half longer than wide, a little more in the male, more gradually rounding behind, barely at all wider than the prothorax; striæ fine but sharp, coarse on the declivity, the scutellar long, oblique; lateral series narrowly interrupted medially; intervals almost perfectly flat throughout in both sexes. Length (♂ ♀) 8.0–8.7 mm.; width 3.3–3.6 mm. Idaho (Cœur d'Alene),—Jas. A. Leyden.....**leydeni** n. sp.

24—Scutellar stria very short, isolated; body small in size, with prominent eyes. Black, with the upper surface polished, bronzy-æneous; tibiæ and tarsi obscure rufous; head half as wide as the prothorax; antennæ moderate; prothorax barely two-fifths wider than long, the sides very moderately, subevenly arcuate, becoming gradually subparallel basally; apex two-thirds as wide as the base, deeply sinuate, with very prominent, slightly blunt angles; basal angles right, narrowly rounded, the puncture evidently nearer base than side; impressions obsolete, the stria very fine; foveæ completely obsolete; base gradually strongly sinuate laterally; elytra not quite one-half longer than wide, about as wide as the prothorax, gradually rounding at the sides behind the middle; lateral series abruptly and rather widely interrupted; striæ fine but sharp and deep, impunctate, a little coarser behind, the seventh distinct; intervals feebly convex in the male; under surface wholly punctureless as usual in this section. Length (♂) 6.0 mm.; width 2.35 mm. Pennsylvania.
enervis n. sp.

Scutellar stria rather long, more or less oblique; body moderately large, the eyes less prominent.....25

25—Body moderately stout, elongate-suboval, convex, obscurely bronzed above, the under surface greenish-black; legs obscure rufous, the femora black; head small, distinctly less than half as wide as the prothorax, the eyes moderately convex, the posterior superciliary puncture small, not half as large as the anterior; strioles fine and

deep; antennæ slender, only feebly compressed, extending nearly to the thoracic base, piceous, the three basal joints and some of the fourth bright testaceous; prothorax not quite one-half wider than long, the sides feebly arcuate and subparallel, gradually more rounding and converging anteriorly: apex two-thirds as wide as the base, with prominent though bluntly pointed angles, deeply sinuate; base only very feebly sinuate laterally, the angles right and but slightly blunt, the puncture a little nearer base than side; impressions evident though feeble; foveæ just traceable, the short incised dash of the inner distinct; elytra about as wide as the prothorax, nearly three-fifths longer than wide, the sides very gradually rounding posteriorly; lateral series well spaced but not interrupted medially; striæ fine, impunctate, coarser behind, the seventh distinct, the scutellar oblique, joining the second well behind the base and the first near basal sixth; intervals perfectly flat; tarsi long and slender. Length (♂) 8.0 mm.; width 3.35 mm. Colorado (Akron),—Shantz. **turbata** n. sp.

Body more narrowly elongate-suboval, moderately convex, very bright golden-æneous above; under surface piceous, testaceous along the middle; legs black, the tibiæ rufous; head not quite half as wide as the prothorax; eyes less convex than in the preceding or any other species of our fauna, almost flattened, the superciliary punctures subequal; strioles linear, feebly oblique; antennæ very slender, only slightly compressed, extending to the thoracic base, black, the three basal joints and base of the fourth bright testaceous; prothorax two-fifths wider than long, the sides subparallel, gradually strongly rounding and converging before the middle; apex two-thirds as wide as the base, deeply sinuate, with very prominent and only slightly blunt angles; base rather rapidly posteriorly oblique toward the sides, the angles right, scarcely at all blunt, the puncture about equidistant from base and side; impressions obsolete, the stria very fine but somewhat impressed; foveæ completely obsolete, except the short incised discal dash of the inner; elytra one-half longer than wide, about equal in width to the prothorax, the sides very gradually rounding behind the middle, the subapical sinus small but distinct as usual; striæ impunctate, rather strong and groove-like suturally, not coarser on the declivity, the seventh very fine and almost obliterated, the scutellar long, feebly oblique and somewhat disintegrated; intervals almost flat; sides of the metasternum and the metepisterna with almost imperceptible punctulation. Length (♂) 7.0 mm.; width 2.8 mm. Connecticut (New London). A single example taken by the writer. . . . . **devincta** n. sp.

26—Prothorax longer, not over one-half wider than long. Body elongate-suboval, convex, polished, feebly bronzed; under surface black, shining; tibiæ and tarsi rufous, the femora piceous; head well developed, with very prominent eyes, more than half as wide as the prothorax, the strioles short and fine; antennæ missing in the type; prothorax with the sides barely arcuate and just visibly converging, gradually more converging in about anterior half; apex nearly three-fourths as wide as the base, moderately sinuate, with rounded angles; basal

angles right, sharp; basal transverse impression obsolete, the anterior feeble and marked with short longitudinal strioles; stria very fine, not impressed; foveæ deeply impressed; surface wholly impunctate; elytra nearly one-half longer than wide, about as wide as the prothorax, the sides rather rapidly rounding behind; lateral series widely and irregularly spaced but not definitely interrupted medially; striæ fine, scarcely at all coarser apically, impunctate, the seventh almost completely obliterated, the scutellar rather short, fine, oblique, free at tip; intervals perfectly flat; middle tibiæ (♂) obtusely, angularly bent within at the middle. Length (♂) 6.0 mm.; width 2.5 mm. New Mexico (Fort Wingate),—Shufeldt.

wingatei n. sp.

Prothorax short and transverse, three-fourths to four-fifths wider than long.....27

27—Elytra with the sides gradually rounding and obliquely converging behind from before the middle. Body stout, convex, obscurely bronzed above, moderately shining, the elytra (♀) alutaceous, with strong micro-reticulation; under surface piceous-black, shining; legs dark and uniform rufous throughout; head barely half as wide as the prothorax, with rather prominent eyes and short, very oblique strioles; antennæ short, not very slender, piceous, excepting the three basal joints; prothorax three-fourths wider than long, the sides broadly arcuate, straighter and parallel in about basal half; apex three-fourths as wide as the base, evenly, rather deeply sinuate, with bluntly rounded angles, the basal right; surface wholly impunctate, the impressions subobsolete, the foveæ deeply impressed, the inner inclosing anteriorly the usual short incised line; elytra two-fifths longer than wide, near the middle slightly wider than the prothorax; apex narrowly but obtusely subprominent; lateral series not interrupted; striæ and flat intervals nearly as in the preceding. Length (♀) 6.8–7.0 mm.; width 2.8–2.9 mm. Colorado (Boulder Co.),—L. W. Casey.....**oviformis** n. sp.

Elytra with the sides rapidly rounding from distinctly behind the middle; body less oval and more oblong.....28

28—Elytra near the middle slightly wider than the prothorax, very evidently in the female but barely in the male. Body rather stout, oblong-oval, narrower in the male, bright bronze to greenish-metallic above; under surface greenish-black; legs obscure rufous, the femora slightly piceous; head half as wide as the prothorax, with rather prominent eyes and short, very oblique strioles; antennæ notably short, the joints obconic and feebly compressed, fusco-testaceous, the first three joints paler; prothorax throughout nearly as in the preceding, except that the median stria is coarser and impressed; surface apparently never with a trace of the peculiar punctuation observable in the following two species; elytra short, scarcely two-fifths longer than wide; striæ fine, not materially coarser behind, the seventh subobliterated, the scutellar moderate, broadly free at tip as a rule; intervals flat or very nearly; lateral series not interrupted. Length (♂♀) 5.7–7.3 mm.; width 2.2–3.2 mm. Lake Superior (Marquette and Duluth). Abundant.....**convexa** Lec.

Elytra about equal in width to the prothorax, the pronotum occasionally with peculiar punctures apically and basally.....29

29—Color above bright æneous, rarely metallic greenish or bluish, oblong-oval, similarly convex; under surface black to piceous; legs black, the tibiæ obscure rufous; head rather distinctly more than half as wide as the prothorax, otherwise nearly as in *convexa* throughout; prothorax three-fourths wider than long, in outline nearly as in the preceding but with relatively somewhat wider and less deeply sinuate apex; surface usually completely impunctate, but occasionally there are scattered punctures along the obsolete anterior impression and in about two regular lines of similar punctures along the middle of the feeble posterior impression, the lines parallel to the base, somewhat as in the next species; elytra longer than in *convexa*, more than two-fifths to about one-half longer than wide; striation nearly as in *convexa*, the seventh usually more distinct, but the sixth and seventh are frequently finely comminuted, apparently as though punctulate. Length (♂♀) 5.5–7.0 mm.; width 2.15–2.8 mm. Colorado (Boulder Co.) and at Akron. Rather abundant.

polita Lec.

Color above black, with feeble violaceous lustre, the entire elytra rufo-piceous, without metallic lustre; under surface piceous; legs rufous, the femora picescent; tarsi rufous; form more broadly oblong than in *polita*, only moderately convex; head half as wide as the prothorax, the eyes well developed, rather prominent, the strioles short, linear, very oblique; antennæ slender, piceous, the three basal joints testaceous, not extending to the thoracic base; prothorax more than three-fourths wider than long, the arcuate sides straighter and parallel in about basal half; apex fully two-thirds as wide as the base, the sinus moderate, the angles very broadly rounded; impressions subobsolete, the anterior in the type with numerous coarse but shallow punctures, the posterior with two transverse straight series, exactly parallel to the base, of similar but close-set punctures which extend across the median parts from one inner fovea to the other; foveæ deeply impressed; elytra two-fifths longer than wide, about equal in width to the prothorax, obtusely rounded behind, the lateral series not interrupted; striæ moderately fine, feebly impressed suturally, not coarser behind, everywhere finely but obviously punctulate, the seventh feebler and finer than the others, the scutellar rather long, not free; intervals flat, feebly convex suturally; hind tarsi very long and slender. Length (♂) 6.4 mm.; width 2.8 mm. New Mexico (Las Vegas). One example.....**piceola** n. sp.

30—Sides of the prothorax very moderately and evenly arcuate from base to apex, somewhat as in *impuncticollis*. Rather stout, oblong-oval, convex, shining, the female elytra strongly micro-reticulate and dull; upper surface with scarcely any metallic lustre; under surface and legs throughout obscure rufous or piceous; head fully half as wide as the prothorax, with rather feebly convex eyes and short oblique strioles; antennæ slender, feebly compressed, extending to the thoracic base, black, the two basal joints dark rufous, clouded with blackish above; prothorax one-half wider than long, to barely more (♀),

the sides feebly converging from base to apex, the latter two-thirds as wide as the base and deeply sinuate, the angles prominent and but slightly blunt, the basal right, the puncture but little nearer base than side; impressions obsolete, the stria very fine; foveæ very feeble and indefinite, the outer oblique when present, the short incised dash of the inner evident; elytra barely visibly wider than the prothorax, the sides rather rapidly and obtusely rounding behind; lateral series not interrupted, although remotely spaced medially; striæ fine, impunctate, the two inner a little coarser behind, the seventh feeble, the scutellar long, barely oblique, free at tip; intervals flat or nearly so in both sexes. Length (♂ ♀) 8.0 mm.; width 3.5–3.7 mm. Wyoming..... **impedita** n. sp.

Sides of the prothorax more arcuate anteriorly than posteriorly, as usual in the genus.....31

31—Body larger, stouter, oblong-oval and very convex, deep black, feebly shining and without trace of metallic lustre, the elytra strongly microreticulate and alutaceous in the female; under surface deep black, the legs piceous, with blacker femora. Head fully half as wide as the prothorax, the eyes only feebly convex, the strioles subobsolete; antennæ extending to the thoracic base in the female, slender, only feebly compressed, black, the first two joints obscure rufous, the third piceo-rufous, the second and third strongly carinate; prothorax three-fifths wider than long, the arcuate sides becoming straighter but not parallel basally; apex nearly three-fourths as wide as the base, moderately sinuate, with blunt angles, the basal right, the puncture rather small, equally distant from base and side; impressions very feeble, the stria fine and feeble; foveæ broad and faintly impressed, the incisure of the inner very short; elytra subequal in width to the prothorax, evenly ogival in apical two-fifths, about one-half longer than wide; striæ very fine, coarser on the declivity, the seventh still finer and feebly comminuted, the scutellar long, free or not; intervals flat; tarsi long and slender. Length (♀) 8.5 mm.; width 3.5 mm. Colorado (Boulder Co.)..... **ebenina** n. sp.

Body smaller, much less convex, the upper surface more polished and usually with metallic lustre.....32

32—Elytral striæ impunctate, the feebler seventh often comminuted, or quasi-punctulate, however.....33

Elytral striæ minutely and feebly, always more or less irregularly punctulate.....34

33—Strial intervals evidently convex, at least in the male. Body oblong-suboval, moderately convex, highly polished and with bright subcupreous lustre on the elytra, the sides of the latter and the anterior parts more greenish-æneous; under surface deep black, the legs blackish-piceous throughout, the hind tarsi (♂) very long and slender; head half as wide as the prothorax, with rather prominent eyes and irregularly, subangularly impressed strioles; antennæ slender, extending about to the thoracic base, black, the two basal joints rufous, clouded above with piceous; prothorax less than one-half wider than long, the sides becoming subparallel and less arcuate basally; apex deeply sinuate, nearly three-fourths as wide as the

base, the prominent angles bluntly pointed; basal angles right, the puncture barely nearer base than side; impressions feeble, the stria fine; foveæ indefinite and feeble, the incisure of the inner very short and sometimes indistinct; elytra nearly one-half longer than wide, barely visibly wider than the prothorax, obtusely rounded in apical third; striæ moderate, distinctly impressed, especially inwardly, the scutellar long, free at tip; lateral series not interrupted; intervals more convex inwardly. Length (♂) 6.8 mm.; width 2.9 mm. New Mexico (Jemez Springs),—Woodgate. . . . . **castalia** n. sp.

Strial intervals flat or virtually so in both sexes. Body rather broad, oblong-suboval, moderately convex, polished above, with more or less evident bronzy lustre; under surface and legs black; head well developed, very distinctly more than half as wide as the prothorax as a rule, the eyes large, moderately convex; antennæ slender, extending to the thoracic base, black, excepting the two basal joints; prothorax two-thirds to three-fourths wider than long, the arcuate sides becoming gradually parallel and nearly straight in about basal half; apex three-fourths as wide as the base, deeply sinuate, the prominent angles only very narrowly blunt; basal angles right, the puncture but little nearer base than side; impressions obsolete, the stria fine, entire or not; foveæ feeble, the outer oblique, the lineate incisure of the inner distinct; elytra nearly one-half longer than wide, about as wide as the prothorax, obtusely rounded in about apical third; striæ fine, the scutellar very variable in length; lateral series not or very narrowly interrupted; hind tarsi (♂) notably long. Length (♂ ♀) 7.0–8.0 mm.; width 2.9–3.8 mm. Colorado (Boulder Co.), Kansas and New Mexico (Fort Wingate). Thirteen specimens. **confusa** Lec.

34—Form oblong-suboval, distinctly bronzed above, the under surface and legs black, the trochanters piceous; elytra rather feebly alutaceous and distinctly micro-reticulate in the female; head smaller than in *confusa*, barely half as wide as the prothorax; eyes only feebly convex, the striolcs minute or obsolete; antennæ rather short, not extending to the thoracic base in the female, moderately compressed, not very slender, the joints somewhat obconic, deep black, the first rufous, the second in great part piceous; prothorax not quite one-half wider than long, the arcuate sides nearly straight but scarcely parallel behind the middle; apex sinuate, three-fourths as wide as the base, the angles broadly rounded; basal angles right, not rounded, the puncture coarse, perforate, very slightly nearer base than side, well separated from both; transverse impressions distinct, the stria short, fine; foveæ feebly impressed, the incisure of the inner distinct, the outer lineiform and oblique; elytra fully one-half longer than wide, about as wide as the prothorax, the sides gradually rounding behind the middle; lateral series narrowly interrupted; striæ fine, not coarser behind, the scutellar long, free, disintegrated; intervals just visibly convex and vestigially uneven. Length (♀) 6.5 mm.; width 2.8 mm. Colorado (Boulder Co.). . . . . **subpunctata** Lec.

From more narrowly elongate-oval and very bright cupreo-æneous above, the elytra highly polished and with feeble micro-reticulation in the

female; under surface and legs deep black, the stiff setæ fulvous; head not so small, fully half as wide as the prothorax; eyes much more convex and prominent, the strioles normal, linear and oblique; antennæ almost similar, except that both the two basal joints are in great part piceous; prothorax nearly similar but shorter, somewhat more than one-half wider than long, the sides slightly diverging basally; apex similar; basal angles right, sharp, the puncture similar in position but smaller; impressions and foveæ nearly similar, the former less pronounced; elytra even more gradually narrowed and rounded behind, one-half longer than wide, at the middle just visibly wider than the prothorax; striæ nearly similar but still finer, the lateral series interrupted medially; intervals virtually flat in general plan but unevenly undulated; hind tarsi long and slender. Length (♀) 6.0–6.5 mm.; width 2.6–2.7 mm. Lake Superior (Duluth and Marquette) ..... **æneolucens** n. sp.

The species described by LeConte under the name *difficilis*—afterwards suppressed—is truly a close relative of *impuncticollis*, but seems distinct by reason of its larger size and broader outline. Two allied species have also been confused under the name *fallax;* the eastern form, or true *fallax*, is larger and stouter than *hesperia;* it extends from the Atlantic seaboard, at least as far to the south as North Carolina and westward to Colorado, while *hesperia* extends from the Pacific coast eastward as far as New Mexico. The segregation of these two forms in large series demonstrates their specific distinctness, but this might not be so evident in comparing single specimens.

The division of *Amara* having simple male prosternum and without an ocellate subscutellar puncture, is composed of far more numerous species than that having the subscutellar puncture, and they are more diversified in structure and coloration. I have found the position of the posterior thoracic puncture a particularly valuable and easily observed taxonomic character in this division of the genus—much more decisive than the carination of the second or third antennal joint, which is often very difficult to determine. The small æneous species allied to *polita*, having this puncture crowded into the extreme apex of the thoracic angle, have occasionally a remarkable type of pronotal punctuation, as related under that species and *piceola*. I cannot imagine what the eastern forms placed under *polita* by Hayward can be, but they are not that species in all probability; *convexa* Lec., is evidently different, but has been sunk in synonymy under *polita*. A few species such as *cras-*

sispina, *parviceps*, *cælebs*, *brunnipes* and *protensa*, as well as the purely Alaskan *littoralis*, are unknown to me and have therefore not been included in the above statement.

I am rather uncertain as to the correct position of *ebenina* in the series; the two basal joints of the antennæ are obscure rufous, the third more piceous than rufous, but not black like the succeeding joints, indicating perhaps an intermediate stage between those species having two and those with three rufous basal joints. However, *ebenina* is so isolated in its very convex form and rather dull, intensely black integuments, that it should be recognized easily; it does not agree with the description of *protensa* as given by Putzeys. The species described above under the name *castalia*, is peculiarly brilliant in coloration. I have only a single specimen that can reasonably be assigned to *subpunctata* Lec., and it has never been compared directly with the type; the punctures are very minute, as they are also in *æneolucens*, but on the more polished surface of the latter, the strial intervals have a peculiarly crumpled or subnodular aspect; *subpunctata* is broader, more oblong and less oval than *æneolucens*, if I have identified it correctly as seems probable.

In some species, such as *turbata* and *piceola*, the posterior superciliary puncture becomes very small when compared with the anterior; it is easy to conceive that it occasionally may become vestigial, and this may be the condition in those European species of the subfamily which are said to have but one supraorbital seta, although, according to Hayward (l. c., p. 15), it is the anterior puncture that is wanting; he also refers to one species which is said to lack both setæ. I think that in these instances closer observation would possibly reveal at least traces of the missing puncture, and the case is probably not exactly like that observed in *Micratopus fusciceps*, and presumably also in the closely allied *Blemus æneseens* Lec., referred to on p. 3 of the present work.

Triæna Lec.

While closely allied to *Amara*, as shown by general characters, such as outline of the prothorax, antennal coloration, prosternal structure of the male and pubescent hind tibiæ in that sex, as well as the presence of a single puncture at each side of the abdominal apex in the male and two in the female, I am disposed to consider

Triæna a valid genus, related to *Amara* in much the same way that *Triplectrus* is to *Anisodactylus*. The trifid anterior tibial spur at least is a purely non-sexual feature, which can be said of but very few of the taxonomic characters serving for generic definition in the Amarinæ. The lateral series of ocellate elytral punctures is always more or less interrupted medially.

The species in my collection may be known as follows:

Elytra with a subscutellar ocellate puncture.....2
Elytra completely devoid of the ocellate puncture; antennæ black, with three basal joints and base of the fourth testaceous.....7
2—Antennæ with the first four joints pale testaceous, the fourth often feebly infumate, however, except basally. Body oblong-suboval, strongly convex, polished throughout in both sexes, æneous to viridiæneous above, black beneath; legs bright rufous, the tarsi infuscate; head but little more than half as wide as the prothorax, with large and moderately prominent eyes, the antennæ slender, piceous except basally; prothorax widest at base, two-fifths wider than long, the sides feebly arcuate, more rounded apically; apex scarcely two-thirds as wide as the base, sinuate, with well defined and narrowly blunt angles; anterior impression obsolete, the posterior often distinct; inner fovea with a few fine punctures, large, broadly impressed, the incised part distinct, the outer obsolete; posterior puncture nearer base than side; elytra not quite one-half longer than wide, equal in width to the prothorax, the sides gradually arcuate and converging behind the middle; striæ rather fine but deep, impunctate, the lateral fine and superficial, the scutellar moderate; intervals convex, except laterally; anterior tarsi of the male rather feebly dilated. Length (♂♀) 5.6–6.9 mm.; width 2.2–2.8 mm. Lake Superior to Rhode Island, District of Columbia and Virginia (Norfolk). Abundant.....**pallipes** Kirby
Antennæ blackish, the three basal joints and base of the fourth testaceous.....3
3—Femora very pale testaceous.....4
Femora black or piceous-black.....6
4—Legs rufous, the tibiæ feebly infumate distally, the tarsi black; prothorax just visibly wider at about the middle than at base. Body oblong-elongate, moderately convex, polished, the elytra somewhat alutaceous in the female; under surface black, the epipleura rufescent; metasternum and side-pieces virtually impunctate; head nearly three-fifths as wide as the prothorax, with large and moderately prominent eyes; antennæ (♀) rather thick, extending fully to the thoracic base; prothorax two-fifths wider than long, the sides arcuate throughout, more so and slightly converging apically; apex three-fourths as wide as the base, very moderately sinuate, with rounded angles; basal angles right, sharp, the puncture small and at the tip; base broadly sinuate laterally; impressions obsolete; foveal region not evidently punctate, the inner fovea large, broadly impressed,

the incised line short and deep, the outer oblique, linear, distinct and attaining the basal margin; elytra fully one-half longer than wide, ogivally rounded in about apical third, slightly wider than the prothorax; striæ fine, not deep, minutely, closely punctulate, the inner feebly impressed, the scutellar long, not free; intervals flat, almost so internally. Length (♀) 6.8 mm.; width 2.8 mm. Lake Superior (Marquette),—John D. Sherman, Jr. . . . . **shermani** n. sp.

Legs rufous, the tarsi alone piceous; prothorax of the usual form, widest at base. Body notably elongate, rather convex, black, without evident metallic lustre, polished, the elytra (♀) very slightly less shining: epipleura pallescent; metasternum and side-pieces variably punctate; head well developed, fully three-fifths as wide as the prothorax, the eyes large and prominent; antennæ rather long and slender; prothorax two-fifths wider than long, the sides broadly arcuate and anteriorly converging, nearly straight and subparallel behind the middle; apex feebly sinuate, with well marked and but slightly blunt angles; basal angles right, the puncture symmetrically placed; impressions variably evident; foveal region with fine scattered punctures, sometimes virtually impunctate, the foveæ very feeble, the incised discal line of the inner evident, the outer obsolete; elytra one-half longer than wide, the sides arcuate, the apex gradually ogival, at the middle, distinctly (♀), or slightly (♂), wider than the prothorax; subapical sinus pronounced; striæ not very fine, groove-like, very finely, closely punctulate as a rule, the scutellar moderately long, broadly free at tip; intervals nearly flat in both sexes; seventh stria very feeble. Male distinctly smaller than the female. Length (♂♀) 6.3–7.8 mm.; width 2.3–3.0 mm. California (Sta. Cruz to Humboldt Co.). . . . . **longula** Lec.

Legs pale rufous throughout, the tarsi not darker, except at the extreme tips of the joints; prothorax of the usual form, widest at base. 5

5—Body oblong-suboval, convex, highly polished throughout in both sexes, æneous or in part viridi-æneous above, black beneath; head small, barely half as wide as the prothorax, with large and rather prominent eyes; antennæ long, extending well behind the thoracic base in both sexes; prothorax one-half to three-fifths wider than long, with the sides strongly arcuate and converging anteriorly, becoming gradually parallel basally; apex barely two-thirds as wide as the base, rather feebly sinuate and with moderately blunt angles; basal angles right, slightly blunt, the puncture coarse, distant from base and side, nearer the former; base distinctly sinuate at each side; surface somewhat strigose transversely toward the fine median stria, the posterior impression often evident; foveal region with scattered punctures; inner fovea deep, lineiform, distant from the base, the outer small, rounded, subobsolete and discal; elytra very nearly one-half longer than wide, regularly ogival in apical two-fifths, equal in width to the prothorax; striæ rather strong, groove-like, generally impunctate, the scutellar very short, free; intervals evidently convex; anterior tarsi (♂) more strongly dilated than in *pallipes*. Length (♂♀) 5.8–6.5 mm.; width 2.45–2.7 mm. New York. Five examples. [*Amara indistincta* Hald.]. . . . . **angustata** Say

Body oblong-oval, smaller and much more abbreviated than *angustata* and with small head, convex, highly polished above in both sexes and viridi-subæneous, black beneath, the metasternum impunctate; head barely half as wide as the prothorax, the eyes well developed but only moderately prominent; antennæ nearly half as long as the body in the female; prothorax very nearly one-half wider than long, the sides subparallel, feebly arcuate, more so and arcuately converging anteriorly more apically than in *angustata;* apex and base as in that species; foveæ in general subsimilar but still less definite; elytra much shorter, only a third longer than wide, more rapidly ogivally rounded apically, about as wide as the prothorax; striæ even more coarsely impressed, the scutellar longer, less free, the seventh more distinct; intervals convex; hind tarsi subsimilar, slender, the extreme apex of each joint similarly blackish. Length (♀) 5.3 mm.; width 2.35 mm. Lake Superior (Marquette),—Sherman.

flebilis n. sp.

6—Elytra similarly striate and shining in both sexes. Body stouter than in *longula*, oblong-oval, convex, deep black, the upper surface with, to completely without, bronze lustre, the elytra scarcely at all less polished in the female; legs black, the tibiæ and tarsi rufopiceous; head moderate though evidently somewhat over half as wide as the prothorax, the eyes well developed, separated from the front by an acute deep groove; antennæ rather thick, extending to the thoracic base; prothorax large, two-fifths wider than long, the sides strongly rounding anteriorly, subparallel and nearly straight in rather more than basal half; apex feebly sinuate, with bluntly rounded angles, the basal right, the puncture rather small, symmetrically placed; impressions very feeble; surface smooth; foveal region punctureless or with very few small scattered punctures; inner fovea feeble, the incised line very short, the outer very feeble, short, oblique; elytra nearly one-half longer than wide, gradually ogival behind the middle, not or very slightly wider than the prothorax in either sex; striæ moderately fine, sharp, minutely subpunctulate as a rule, the scutellar moderate, somewhat disintegrated; intervals just visibly convex; anterior tarsi (♂) rather strongly dilated. Length (♂♀) 6.5–7.7 mm.; width 2.8–3.2 mm. California (San Francisco to Siskiyou and Humboldt Cos.). Rather abundant, the male less so than the female. . . . . **scitula** Zimm.

Elytra less shining and with finer striæ and flat intervals in the female. Body similarly stout and convex, oblong-suboval, strongly convex, deep black, the male with scarcely visible bronzy lustre; under surface greenish-black; legs as in the preceding; head half as wide as the prothorax, or (♂) a little more, the eyes not quite so large or prominent as in *scitula*, the groove at their base less marked; antennæ nearly similar; prothorax large, two-fifths wider than long, the sides rounded and converging anteriorly, slightly diverging and very feebly arcuate thence to the base, the angles and basal puncture as in the preceding; apex two-thirds as wide as the base, distinctly sinuate, with rather bluntly-pointed angles; impressions very feeble; foveal regions impunctate or nearly so, the inner fovea feeble, the

deep short incisure evident, the outer very feeble, rounded or suboblique; elytra one-half longer than wide, equal in width to the prothorax, very gradually rounded behind the middle, the subapical sinus distinct; striæ not definitely punctulate, moderate and impressed (♂), or very fine and unimpressed (♀), the scutellar long, entire or interrupted, the seventh extremely fine and feeble; intervals rather conspicuously convex (♂), or perfectly flat (♀); anterior tarsi moderately dilated in the male, the abdominal segments each with a small rounded discal impression near each side, especially in the male. Length (♂♀) 6.3–7.2 mm.; width 2.7–3.0 mm. Utah (Provo),—Wickham..... **uinta** n. sp.

7—Form and size somewhat as in *longula*, black, with bronze lustre, shining, the elytra feebly alutaceous in the female, elongate-suboval, convex; under surface black, the legs obscure rufous; head distinctly more than half as wide as the prothorax, the eyes large and rather prominent, nearly as in *scitula;* antennæ extending slightly behind the thoracic base; prothorax relatively not large, the sides strongly rounding anteriorly, subparallel and nearly straight in more than basal half; apex feebly sinuate, with short blunt angles, the basal angles somewhat acute, the puncture near the tip of the angle; impressions very feeble, the foveal region with small sparse punctures; inner fovea long, feebly impressed, its anterior part deep, the outer very feeble, oblique; elytra one-half longer than wide, at the middle of the distinctly arcuate sides nearly a fifth wider than the prothorax—probably much less in the male type, the sides very gradually rounding behind; striæ rather deep and impunctate internally, more shallow and minutely, closely punctulate externally, the scutellar long; intervals nearly flat throughout. Length (♀) 7.7–8.0 mm.; width 3.1–3.2 mm. California (San Francisco Bay). Three examples..... **afoveolata** Hayw.

Form less elongate, much smaller in size, more convex, polished, greenish-black, the elytra scarcely less shining in the female; under surface greenish-black; femora black, with feeble metallic lustre, the tibiæ and tarsi piceo-rufous; head smaller, though sensibly more than half as wide as the prothorax, the eyes nearly as in the preceding; antennæ extending nearly to the thoracic base but with shorter joints, especially toward tip; prothorax shorter, one-half wider than long, otherwise somewhat similar in outline, the hind angles right, the puncture near the tip; apex feebly sinuate with blunt angles; posterior transverse impression distinct, the anterior obsolete; foveal region impunctate, the foveæ also wholly obsolete, except the short deep discal line of the inner, the outer sometimes represented by a small feeble point; elytra one-half longer than wide, only very slightly wider than the prothorax, the arcuate sides gradually rounding behind; striæ rather fine, impunctate, the inner deep and abrupt, the scutellar moderate, disintegrated; intervals feebly but sensibly convex internally. Length (♀) 6.3 mm.; width 2.5 mm. Utah (Provo),—Wickham..... **vapida** n. sp.

Form oblong-suboval, convex, shining, black, with greenish lustre, the elytra rather densely alutaceous in the female; under surface black, not

metallic; legs obscure rufous, the femora still somewhat more obscure; head but little more than half as wide as the prothorax, the eyes not so large as in the two preceding and only moderately prominent; antennæ stouter, extending barely to the thoracic base; prothorax large, barely two-fifths wider than long, the sides parallel and nearly straight, rapidly rounding before the middle; basal angles right; apex more than two-thirds as wide as the base, very feebly sinuate, almost truncate, the angles broadly blunt; impressions obsolete; foveal region virtually impunctate, the inner fovea long, feebly impressed, its anterior part deeper, the outer fovea small, subobsolete; elytra slightly less than one-half longer than wide, just visibly wider than the prothorax, more rapidly and obtusely rounded behind than in the two preceding; striæ rather fine but sharply defined, minutely punctulate, the scutellar oblique, not free, joining the second well behind the base; intervals flat. Length (♀) 6.7 mm.; width 3.0 mm. Arizona (locality unrecorded).....**profuga** n. sp.

Besides *afoveolata*,* there are two other species without the ocellate subscutellar puncture, as shown above. The species described by Horn under the name *belfragei*, is very distinct in its entirely pale antennæ; it is from Texas and I have seen no representative, but the radically different antennæ may betoken other striking differential characters. The value of the presence or absence of the ocellate subscutellar puncture is assumed to be primary, as in the second group of *Amara*, but in one example of *scitula* at hand, there is a full development of this puncture on the right elytron, but no vestige of it on the left.

The species described as *depressa* by LeConte (Ann. Lyc., N. Y., 1848, p. 365) is not mentioned by Horn in his short revision of *Triæna*, but Hayward places it as a synonym of *pallipes*. This is highly improbable, because of its less pronounced convexity and other reasons. I should have been disposed to identify *shermani* as *depressa*, in spite of several important incongruities, were it not for the fact that the seventh elytral stria is said to have five posterior punctures in the latter; there are only two feeble subpunctiform subapical enlargements of the seventh stria in *shermani*. If the type of *depressa* be still in existence, it should be restudied, for it is a distinct species, apparently without doubt—possibly, however, a small *Triplectrus;* this possibility is at least surmisable from the description.

* It is unfortunate that the author was not able to alter this name to harmonize with philologic principles; its present form, as a combination of Greek and Latin, cannot be approved, and yet there is no way to change it under accepted rules.

Subfamily PTEROSTICHINÆ

This is one of the largest of the Carabid subfamilies, and so far as generic subdivision is concerned, perhaps the most difficult. In the definition of genera, more consideration should be given to general habitus than to many of those modifications of special organs constituting the so-called structural characters considered essential by many authors. There are some of these structural modifications of special organs, such as the very singular hind tarsi of *Hammatomerus*, the simply rounded mental tooth of *Piesmus*, as recorded by LeConte, and the numerous broadly impressed elytral foveæ of *Bothriopterus*, which, though unaccompanied by habital differences of marked degree, would nevertheless seem to indicate of themselves distinct genera, but as a rule restricted structural characters are not so decisive as marked difference of habitus, which for instance, forms the chief point of distinction between *Holciophorus* and *Hypherpes*. One could not hesitate at all in deciding that *Holciophorus* is a different genus from *Hypherpes* at a mere glance. In the vigorous search for special structural characters to supplement obvious habital differences, many misconceptions have occurred and modifications of really slight importance used in the separation of groups remarkably similar in general appearance, such for instance as the presence or absence of external striation on the tarsal joints. LeConte separates *Evarthrus* because of the broader and widely truncate fourth palpal joint being shorter than the third, overlooking the fact that this is almost the identical structure of the palpi in the widely different *Holciophorus* and occurs to some extent in several other groups as well as *Evarthrus*. In fact the subfamily Pterostichinæ constitutes one of those composite aggregates, wherein the division into surnamed units for taxonomic convenience should be founded more upon sense of proportion than upon differences of structure in special organs.

In applying definite tangible structural peculiarities to the definition of generic groups, a few observations seem appropriate. First, the form of the basal angles of the prothorax is not decisive in the limitation of genera; there are four or five groups to be recalled at present where the form of these angles varies from acutely

prominent to broadly rounded as in *Leptoferonia*, *Euferonia*, *Gastrosticta*, *Ferestria* and others. Again the basal thoracic foveæ may be double or single in the same group, as in *Hypherpes* and *Euferonia*. Then also what might appear to be a most important character in estimating genera, that is the number of discal elytral punctures, though in general a rather constant criterion, occasionally becomes unreliable, as for instance in *Euferonia*, where though normally two in number, there may happen accidentally to be three on one or both elytra, as was a puzzling fact to LeConte in comparing the type of *relicta* Newm., having three punctures, with his *protensa*, having but the normal two. The punctures in *Cryobius* are still more variable, though never single or altogether wanting. So, to repeat, in differentiating genera in this subfamily and fixing their boundaries, a broad conception of general appearance pervading the species is, as a rule, more useful as a criterion than the modifications of special organs. I have endeavored to apply this principle in some parts of the following table of our supposably generic groups:

Anterior tarsi with the dilated joints regular in the male.....2
Anterior tarsi with the joints obliquely dilated in the male.....25
2—Met-episterna notably short, never decidedly longer, and generally much shorter, than wide.....3
Met-episterna always decidedly elongate.....17
3—Elytra without dorsal puncture.....4
Elytra each with one to five or six dorsal punctures.....8
4—Body short, stout, oblong and convex; head small, the eyes very prominent; maxillary palpi with broad and truncate terminal joint, that of the labial broad and securiform; prothorax with irregular duplex basal foveæ, but little narrowed at base, with sharp angles and diversified side margins; elytral striæ very deep, the scutellar short. Atlantic Regions. [Type *Abax chalybeus* Palli.].....**Myas** Dej.
Body elongate, sometimes much depressed.....5
5—Hind and middle tarsi with the joints pedicellate; head very large, tumid behind the eyes; elytral striæ moderate, the scutellar very short and feeble; body rather large, resembling a narrow *Holciophorus*. Pacific coast. [Type *H. morionides* Chd.]
Hammatomerus Chd.
Hind tarsi normal, the joints obtriangular.....6
6—Thoracic sides coarsely margined; body very large, the head large, swollen behind the eyes; prothorax subcordiform, with notably prominent anterior, and well defined posterior, angles; elytral striæ fine, punctulate, the scutellar short. Pacific coast fauna. [Type *Feronia atra* Dej.].....**Holciophorus** Lec.
Thoracic sides more or less finely margined, the anterior angles never more than moderately prominent.....7

7—Head very large, tumid behind the eyes, which are not prominent; body elongate and subcylindric, shining, the elytral striæ regular, rather deep, the scutellar usually well developed; abdomen impressed at apex in the male. Atlantic regions. [Type *Pt. rostratus* Newm.] **Cylindrocharis** nov.

Head moderate to rather large, never very small and always with prominent eyes, seldom with any pronounced tumidity behind the eyes, this being evident however in such forms as *tarsalis* and *herculaneus;* palpi slender; body never very small or subcylindric, though parallel and flattened in many species; elytral striæ fine to deep, regular; lustre shining, sometimes opaque as in *menetriesi;* abdomen not apically modified in the male, except in *castaneus.* Species extremely abundant west of the Rocky Mountains, very few in number in the Atlantic regions. [Type *Feronia valida* Dej.] *Pterostichus* Auct. Amer. . . . . **Hypherpes** Chd.

Head rather small and elongate, the eyes scarcely prominent, the palpi slender; body small, parallel or subcylindric; elytral striæ deep, regular, complete and usually impunctate; abdomen not modified at tip in the male. Pacific coast. [Type *Fer. angusta* Dej.] **Leptoferonia** nov.

8—Elytra very constantly with a single dorsal puncture, excepting in an aberrant section of *Eumolops,* having subopaque integuments, where there are three small punctures on each elytron 9

Elytra with two dorsal punctures, sometimes accidentally with three on one or both elytra; body elongate, neither parallel nor notably ventricose, shining in both sexes; elytral striæ complete, deep, the scutellar well developed 15

Elytra with three dorsal punctures, four in *Refonia* and variable in *Cryobius;* genera rather widely isolated among themselves. 16

9—Elytral striæ complete and well developed or at least evident throughout 10

Elytral striæ in great part obliterated 14

10—Prothorax constricted basally, the basal angles generally well defined 11

Prothorax with the sides oblique basally, sometimes feebly and briefly sinuate, the angles usually obtuse; scutellar stria obsolete 13

11—Head small; body small, ventricose; antennæ and tarsi very slender; abdomen not apically modified in the male. Atlantic regions. [Type *Fer. honesta* Say] . . . . . **Gastrellarius** nov.

Head well developed; body larger in size, sometimes very large; antennæ usually more or less thick 12

12—Maxillary palpi slender, with the third and fourth joints subequal in length, the fourth a little wider than the third and truncate; antennæ filiform; body rather small in size, shining, rarely dull in the female; thoracic base always narrower than the apex, the anterior angles not deflexed and the foveæ always bistriate; elytral striæ with true but small and often indistinct punctures. Atlantic regions to southern Rocky Mountains. [Type *Fer. constricta* Say] **Anaferonia** nov.

Maxillary palpi slender, the fourth joint longer but not wider than the third and not truncate; antennæ filiform; body moderate to rather large in size, opaculate or feebly shining; basal thoracic constriction feeble, the anterior angles not deflexed, the foveæ single; elytral striæ with true and distinct punctures. Southern Atlantic regions. [Type assumed *C. roticollis* nov.]..... **Cyclotrachelus** Chd.

Maxillary palpi stout, the fourth joint shorter than the third and truncate; antennæ thick basally; body very large, the head large; anterior thoracic angles deflexed, the base deeply constricted, the foveæ irregularly bistriate; elytral striæ almost obsolete and without true punctures, the scutellar stria wanting; tooth of mentum rather small, deeply emarginate at apex, with acute lobes. Texas. [Type *M. gigas* nov.]..... **Megasteropus** nov.

Maxillary palpi rather slender, the last joint slightly to much shorter than the third, and never notably wider, fusiform, never more than narrowly truncate; body moderately large, often very stout, with only moderately large head and shorter mandibles, which, as usual in this section, are coarsely strigose; anterior thoracic angles not deflexed, the constricted base wider to much narrower than the apex, the foveæ always bistriate; elytral striæ with true and distinct punctures; mentum tooth as in the preceding but relatively still smaller. Atlantic to Sonoran regions. [Type *E. sexualis* nov.]

Eumolops nov.

13—Body larger, usually opaque or with the anterior parts slightly more shining in both sexes, the palpi nearly as in the preceding genus; thoracic foveæ large, bistriate; elytral striæ moderate, distinct, always distinctly punctured; abdomen not modified at tip in the male. Atlantic to Sonoran regions. [Type *Fer. sigillata* Say]

Evarthrus Lec.

Body smaller and more slender, the integuments shining, the elytral striæ deep, impunctate as a rule; maxillary palpi slender, the fourth joint as long as the third or longer; thoracic foveæ single, linear; last ventral segment strongly modified in the male by impression or tuberculation. Atlantic regions. [Type *Evarthrus mancus* Lec.]

Monoferonia nov.

14—Body small and ventricose, the head well developed; basal thoracic angles obtuse, sometimes with a minute acute prominence at the setigerous puncture, the foveæ single, short, deep and oval. Atlantic regions. [Type *Pt. lævipennis* Lec.]..... **Ferestria** Leng

15—Prothorax finely margined at the sides; body small and more slender; pronotal foveæ single, long and linear; elytral striation normal. Atlantic regions. [Type *Pt. palmi* Schf.]..... **Feronina** nov.

Prothorax coarsely margined at the sides; body larger, more convex and less slender, always strongly shining in both sexes, the elytral striæ complete and very deep, the dorsal punctures somewhat variable though normally two in number; thoracic angles obtuse, the foveæ large, generally duplex; the angles are however sharply marked and the foveæ single in *lachrymosa;* abdomen not modified apically in the male. Atlantic regions. [Type *Fer. stygica* Say]

Euferonia nov.

Prothorax coarsely margined but not so evenly as in *Euferonia*, the reflexure gradually broad and obsolescent posteriorly, the hind angles obtuse; body resembling *Euferonia* in general appearance, though less convex, differing much in having the elytral striæ unevenly broken throughout and the apex more obtuse; it differs further in having pronounced male modification of the abdominal apex; dorsal foveæ traceable in the confused sculpture only by the attendant setæ, which are apparently two or three in number. Atlantic boreal regions. [Type *Pt. punctatissimus* Rand.].....**Lyperopherus** Mots.

16—Habitus strongly suggesting *Euferonia*, the body shorter, broader, less convex, with opaque lustre and with more oblique sides of the prothorax, the angles and foveæ nearly similar and the sides similarly coarsely margined; head larger, the palpi normal; striæ deep, impunctate, the scutellar rather well developed; dorsal punctures four. Atlantic regions. [Type *Fer. mœsta* Say].....**Refonia** nov.

Habitus recalling *Myas* but much flatter, with the prothorax not narrowed at base, the foveæ large, deep and irregularly duplex, the thoracic sides coarsely margined, palpi slender; integuments polished throughout, the striæ deep, the scutellar deep but only moderately long; prosternal process margined or not. Atlantic regions. [Type *Fer. permunda* Say].....**Abacidus** Lec.

Habitus nearly as in *Ferestria;* body small, ventricose to subparallel; prothorax finely margined at the sides, which are oblique posteriorly, the angles obtuse or minutely and acutely prominent, the foveæ single; elytral striæ deep and punctured, more or less obliterated at the sides and tip; abdomen with conspicuous coarse punctures except axially. Atlantic regions. [Type *Fer. ventralis* Say]
Gastrosticta nov.

Habitus somewhat as in the more minute exponents of *Argutor;* body always notably small in size, including some of the smallest of the subfamily, elongate, moderately convex; palpi slender, the antennæ rather thick; prothorax finely margined at the sides, sinuate before the sharp basal angles, the foveæ single or double; striæ not deep as a rule, feebler externally, the scutellar imperfect; dorsal punctures becoming variable, two to five or six in number. Species numerous in the far north, especially in the Pacific districts of both hemispheres. [Assumed type *Pt. hudsonicus* Lec.].....**Cryobius** Chd.

Habitus in some respects as in *Piesmus*, apterous, small in size; prothorax trapezoidal, finely margined, the foveæ single, linear; seventh elytral stria subobsolete anteriorly, deep posteriorly; body rather depressed. Male with the abdomen impressed and tuberculate at apex. Atlantic regions. [Type *Pt. lubricus* Lec.].....**Paraferonia** nov.

17—Dorsal punctures of the elytra two in number; body subparallel, the integuments highly polished; head moderate, the palpi normally slender; prothorax coarsely margined at the sides, which are oblique posteriorly, the angles obtuse, the foveæ single; elytral striæ very coarse, deep and strongly punctured. Atlantic regions. [Type *Fer. submarginata* Say].....**Piesmus** Lec.

Dorsal punctures three, small as usual.....18

Dorsal punctures five, rarely six, impressed and larger than in any other group of the subfamily 24

18—Antennæ with the subbasal joints carinate; integuments usually polished and almost always metallic in coloration; head very moderate, the slender palpi with the last joint fusiform and rather pointed; thoracic foveæ two in number, sometimes variable; elytral striæ generally rather fine, the scutellar long. Atlantic and Pacific regions. [Assumed American type *Fer. chalcites* Say (*sayi* Brul.)] **Pœcilus** Bon.

Antennæ with the subbasal joints not carinate; integuments usually polished, only very seldom with metallic lustre of any kind 19

19—Prothorax coarsely margined at the sides; body parallel and subdepressed, moderate to large in size; head large, the palpi slender, occasionally with the fourth joint much shorter than the third, in which section, also, the usually polished elytra become dull; thoracic angles sharply marked, the foveæ duplex; striæ moderate, generally feebler externally and posteriorly, the scutellar very long. Atlantic regions. [Type *Fer. tartarica* Say] . . . . . **Lophoglossus** Lec.

Prothorax more or less finely margined at the sides 20

20—Thoracic foveæ duplex; head well developed, with prominent eyes and slender palpi; prothorax more or less constricted at base, except in *luctuosus;* hind angles always sharply marked; elytral striation somewhat as in *Lophoglossus;* scutellar stria usually long; hind tibiæ normal in the male. Atlantic regions and Europe. [Assumed American type *Fer. ebenina* Dej.] . . . . . **Omaseus** Dej.

Thoracic foveæ single, linear, impressed; hind angles never carinate. . 21

21—Posterior tibiæ pubescent within in the male; prothorax orbicular, never constricted at base, the angles obtuse, sometimes with a minute acute prominence as in *mutus;* head only moderate in size; elytral striæ deep, never punctate, the scutellar long. Atlantic regions. [Type *Fer. muta* Say] . . . . . **Dysidius** Chd.

Posterior tibiæ not more pubescent in the male 22

22—Head moderately developed as in *Dysidius;* thoracic sides more or less sinuate basally, the angles sharp, the fovea long; elytral striæ not punctate, the scutellar long. Pacific coast regions. [Type *Fer. lustrans* Lec.] . . . . . **Parargutor** nov.

Head notably small; body very small in size 23

23—Prothorax flattened and deplanate toward the broadly rounded basal angles; elytral striæ impunctate, the scutellar completely wanting, the ocellate puncture distinct however as usual. Atlantic regions. [Type *Fer. erythropus* Dej.] . . . . . **Pseudargutor** nov.

Prothorax not flattened or explanate at the sides, the basal angles sharp and distinct; striæ punctured as a rule, impunctate in *patruelis;* scutellar stria always well developed. Atlantic regions. [Type *Fer. patruelis* Dej.] . . . . . **Micromaseus** nov.

24—Body somewhat as in *Parargutor,* the head moderate; hind angles of the prothorax well defined throughout, the foveæ single, linear; elytral striæ more or less fine, the scutellar long; elytra frequently sericeous in the female. Atlantic to Pacific regions, especially in more northern parts. [Type *Pt. adstrictus* Esch.] **Bothriopterus** Chd.

25—Body oblong-subparallel, small to moderate in size, the integuments polished and with iridescent lustre; head moderate; posterior thoracic angles generally rounded, sometimes sharply defined, the foveæ single; elytral striæ deep, moderately punctured, the scutellar wholly wanting, each elytron invariably with a single dorsal puncture at about the middle of the length. Southern Atlantic and Gulf regions. [Type *Fer. recta* Say]..... **Loxandrus** Lec.

These groups, with but few exceptions, are so homogeneous within themselves as to indicate natural and sharply delimited aggregates of species, which is the usual test of genera or subgenera, but it would be difficult to select those for full generic acceptance and those which should more properly be considered subgeneric in value, which is perhaps the reason why they are nearly all lumped under *Pterostichus* in the European catalogue. *Pterostichus tarsalis* was placed near *morionides* by LeConte as a *Hammatomerus*, but this is a decided error; it is a *Hypherpes* near *serripes*.

The *Pterostichus wrangelli* Csy. (Mem. Col., IV, 1913, p. 131), is nothing more than a synonym of *castaneus* Dej., and the single dorsal puncture on each elytron must be regarded as a remarkable accidental character in the single type of *wrangelli*. *Castaneus* will however constitute a rather distinct subgenus within *Hypherpes*, because of the modification of the last ventral segment in the male by a depression, carina and submedial denticle. The mentum is quadrate in form, with the apex broadly and rather deeply sinuate, the lobes acute, and the prosternal process is margined along the broad subtruncate tip. The head is less developed than usual in *Hypherpes*.

The genus *Myas* looks decidedly out of place in this subfamily; perhaps it should more properly represent a distinct subfamily group because of the securiform labial palpi, wholly unlike anything known among the more typical Pterostichids. I have included it here simply for completeness, as it was included among the Pterostichids by Horn, though not considered by LeConte in his work on *Pterostichus* and allied genera, and was not mentioned by Hayward in his treatment of the Amarinæ.

I am much indebted to Mr. Leng for calling my attention to the genus named *Lyperopherus* by Motschulsky, founded apparently upon *Pt. punctatissimus* Rand. Mr. Leng states, in a letter just received, that "I think that this genus was erected in Schrenk's

Reise, 1860, page 93, for our species, or for the similar Siberian species *cancellatus*, which is considered a synonym of Randall's species in the Siberian catalogue." In a male of *punctatissimus* very kindly sent by Mr. Leng, taken in Newfoundland, there is a semicircular impression at the abdominal apex, shallow and with flat rugulose surface; it does not differ even varietally from a female in my collection, taken by Sherman in Labrador. As *punctatissimus* is well known, though not abundant, no further reference to *Lyperopherus* will be made in the present work.

In the most recent European catalogue nearly sixty generic and subgeneric names are united under *Pterostichus*. The utility of this course is not apparent; it renders the subject no easier for the student, more greatly complicates nomenclature and furthermore does not express the actualities as found in nature. No very useful or final revision of the subfamily could be formulated without including the entire Pterostichid fauna of the world at large, and not improbably some European groups, already named, may be among the thirty-two appearing in the above provisional table of our own restricted fauna; only seven or eight of these are at present monotypic.

Myas Dej.

This genus is mentioned at the present time only to call attention to an evident mistake in our lists; *foveatus* Lec., is given as a synonym of *cyanescens* Dej., whereas a reference to the descriptions shows beyond doubt that *cyanescens* is a synonym of *coracinus* Say, and that both the latter and *foveatus* are valid species. The striæ are described as punctate both in *coracinus* and *cyanescens* and as completely impunctate in *foveatus;* the form of the thoracic side margins is also wholly different in the two species, making identification so certain that the synonymy proposed, apparently by LeConte himself (Bull. Bk., Dec. 1882), is wholly unaccountable. The elytra in *foveatus* are described by LeConte as obsoletely violaceous and shining; in my two examples, from Massachusetts and Lake Champlain, the elytra are bright æneo-violaceous in lustre.

Cylindrocharis n. gen.

The general appearance of the few known species allied to *rostrata* Newm., is so peculiar that I think there can be but little doubt

that they should constitute a distinct genus, as named in the table. The maxillary palpi are long and slender, but the fourth joint is distinctly shorter than the third. The mentum tooth is very broad, with the apex deeply sinuate medially, the lobes rounded. The mandibles are finely and closely striate, except toward the inner and outer margins and apex. The prosternum is subsulcate, the process wholly unmargined, and the head is strongly tumid behind the eyes. The known species are as follows:

Elytral striæ widely and evenly spaced, the intervals virtually flat even toward the sides; body larger and more elongate, cylindric, the outer basal thoracic fovea separated from the sides by an obtuse though pronounced carina, the basal angles somewhat prominent; scutellar stria moderate, generally continuous with the first stria, the basal part of the latter detached. Length (♂ ♀) 14.8–16.0 mm.; width 4.8–5.0 mm. North Carolina (Black Mts.).....**rostrata** Newm.

Elytral striæ unevenly spaced, closer, deeper and sulciform toward the sides, where the intervals are narrower and extremely convex; species not quite so large in size.....2

2—Pronotum with a fine, rather sharp carina near and parallel to the side margins basally; elytral striæ not evidently punctulate, the scutellar stria distinct, moderately long; elytra distinctly wider than the prothorax.....3

Pronotum without a distinct carina near the margin posteriorly; elytral striæ distinctly punctate; scutellar stria indistinct.....4

3—Head (♂) larger, nearly as wide as the prothorax, the eyes much less prominent than the tumidity behind them; body deep black and polished in both sexes; antennæ much compressed, extending rather behind the thoracic base; medial striation of the mandibles coarser; prothorax virtually as long as wide, the base nearly four-fifths as wide as the apex, the sides feebly arcuate, becoming gradually very slightly sinuate toward the obviously sharp hind angles, which are a little more than right; inner basal fovea large, deeply impressed and smooth, the outer narrow and feeble along the pronounced carina; elytra much shorter than in *rostrata*, three-fifths longer than wide, rather obtusely rounded behind, the sinus very faint. Length (♂ ♀) 12.7–14.7 mm.; width 4.4–5.0 mm. Probably Indiana.
sulcatula n. sp.

Head not quite so large, the eyes almost as prominent as the tumidity behind them; body narrower, less deep black and more piceous, similar in lustre and general sculpture, very shining; mandibular striation finer; antennæ slightly shorter; prothorax nearly similar, though not so large; elytra similar in general character but narrower, the sublateral series of coarse foveæ similarly subconfluent posteriorly. Length (♂) 13.5–14.5 mm.; width 4.2–4.6 mm. New York and Maine. Two examples.....**piceata** n. sp.

4—Elytra not wider than the prothorax, the striæ deep, punctate; body in general rather similar to the preceding but with distinct punc-

tures of the elytral striæ, indistinct scutellar stria and almost obsolete external carina toward the pronotal base. Length (♀) 13.5 mm. New York. [*Stereocerus grandiceps* Lec.]....**grandiceps** Lec.

The three differential characters relating to the thoracic carination, the scutellar stria and the distinct strial punctures of the elytra, will, if even approximately true, serve to separate *grandiceps* at once from any of the three preceding species. In *rostrata* strial punctures are only occasionally feebly glimpsible under certain angles of reflection, and the same can be said even more truly of *sulcatula* and *piceata*.

Hypherpes Chd.

Pterostichus Bon. (pars) Auct. Amer.

This large genus is almost wholly confined to the extreme western parts of our territories, the small *adoxus* group being its only representation in the Atlantic regions. In my former review of the species, under the name *Pterostichus*, nearly all then known to me were described, and on carefully looking again over the series I can find but little which, under present lights, would appear to be in the nature of obvious error.* A considerable number of species received since that revision, or erroneously identified there, may be defined as follows:

Hypherpes innatus n. sp.—Body only moderately elongate and distinctly convex, subparallel, shining, dark castaneous in color, the elytra alutaceous in the female; head very moderate, not three-fifths as wide as the prothorax, the eyes rather prominent, well developed, the sides behind them not swollen; anterior sulci arcuate outward posteriorly; antennæ paler brown, slightly tapering, barely extending to the thoracic base; prothorax notably large, only slightly wider than long, the base margined except narrowly at the middle, rather broader than the evenly sinuate apex and five-sixths the maximum width, which is before the middle; sides strongly but not broadly reflexed, broadly arcuate, gradually subsinuously oblique posteriorly, the basal angles sharp but rather more than right, the puncture in the angle bounded internally by a finely

* I find that the type of *pugetanus* Csy., is merely the female of *crenicollis* Lec., which was represented in my collection only by a male. The male is generally larger than the female in the larger species of this genus and sometimes, as in *herculaneus* has a shorter prothorax; the sides of the prothorax in the type of *pugetanus* are not obviously crenulate, but this feature is variable in *herculaneus* and all others possessing the character. The identity of *wrangelli* Csy., with *castaneus* Dej., is sufficiently evident, as shown by the male sexual characters at the abdominal apex, which I overlooked in describing *castaneus*.

raised line; surface feebly convex, with widely separated wavy ruguliform lines, the stria moderate; impressions subobsolete; basal foveæ long, broadly impressed, the bottom sharply linear; at the sides basally there is a very feeble longitudinal impression, between which and the sides the surface is feebly elevated; elytra three-fifths longer than wide, at the middle barely a fifth wider than the prothorax, the sides parallel and evenly arcuate; apex obtuse, with feeble subapical sinus; striæ deep, impunctate, the scutellar moderate, oblique; intervals broadly convex, more strongly toward the sides and apex. Length (♀) 13.0 mm.; width 5.3 mm. Canada (west of the Rocky Mts.).

This species may be placed near *breviusculus*, but is still shorter, with relatively much larger and more convex prothorax and smaller head; in *breviusculus* and others of that special section, the posterior thoracic puncture, closely placed in the hind angles, is similarly inclosed within a small elevated ring.

Hypherpes spissitarsis n. sp.—Elongate, subparallel, slightly convex, deep black and shining, the legs and tarsi black; head two-thirds as wide as the prothorax, the swollen sides behind the eyes as prominent as the latter; mandibles finely punctulate distally; antennæ black, moderately stout; prothorax a fifth wider than long; sides parallel and broadly, evenly arcuate from the distinctly produced and rather sharp apical angles, becoming broadly, just visibly sinuate in about basal fourth; base broadly sinuate medially, equal in width to the deeply sinuate apex and feebly margined laterally, the angles right, not rounded; impressions barely traceable; inner fovea long, the outer short, abruptly defined externally; elytra three-fourths longer than wide, parallel and with feebly arcuate sides and rapidly rounded obtuse apex, a fifth wider than the prothorax; humeri strongly dentate; subapical sinus broad and feeble; striæ not fine, deeply impressed and with minute punctulation along the bottom of the grooves, the scutellar short, with distinct ocellate puncture; intervals distinctly convex; inner side of the hind tibiæ serrate, the hind tarsi short, thick, not three-fourths as long as the tibiæ, not grooved externally; anterior tarsi broadly dilated, deep black; sides of the body beneath sparsely punctate. Length (♂) 17.5 mm.; width 6.2 mm. California (Lake Tahoe). A single example.

This species is allied rather closely to *tarsalis* Lec., from the same region, but it is narrower, more convex, with smaller head, more evenly rounded sides of the prothorax and with more prominent and sharper apical angles, less strongly punctured sides of the body beneath and other features. The last ventral segment of the male has no tolerably definite transverse apical impression as in *tarsalis*, but the surface is gradually turned downward apically. The elytral striæ are more definitely punctulate in *tarsalis* than in *spissitarsis;* they are not impunctate as stated by LeConte.

The three following species are allied more or less closely to *validus* Dej.; they all have the ocellate puncture near the scutellum similarly distinct:

Hypherpes kansanus n. sp.—Subparallel and very moderately convex, shining, piceous, the legs and epipleura pale rufous, head three-fifths as wide as the prothorax, with moderate prominent eyes and deep arcuate converging anterior sulci; antennæ longer than the head and prothorax, rather thick, ferruginous; prothorax just visibly wider than long, the sides broadly, subevenly rounded, gradually very feebly sinuate broadly toward base, the latter feebly sinuate medially, strongly margined laterally and distinctly wider than the apex, which is feebly sinuate, with broadly rounded angles, the basal angles right, slightly blunt at tip; impressions obsolete; inner fovea long, the outer wanting, the intervening surface convex, the carina wanting; elytra three-fourths longer than wide, a sixth wider than the prothorax, parallel, with feebly arcuate sides and gradually rounding apex, the humeral denticle feeble and vestigial, the subapical sinus broad and shallow; striæ not coarse, deeply impressed and without trace of punctulation, the scutellar short and deep; intervals distinctly convex; prosternum distinctly sulcate; anterior male tarsi strongly dilated and paler, ferruginous. Length (♂) 12.5 mm.; width 4.7 mm. Kansas (probably western),—Snow.

Differs from *validus* in its more parallel form and relatively narrower hind body, still more broadly rounded apical thoracic angles, paler legs and antennæ, more sharply sulcate prosternum and other characters. The type was considered under *validus* in my previous revision.

Hypherpes responsor n. sp.—Rather more convex, not so parallel, shining, black, the elytra alutaceous in the female; under surface and legs piceo-rufous, the anterior tarsi still paler; head two-thirds as wide as the prothorax, the eyes moderate in size and prominence, with the deep sulci arcuately converging; mandibles rufescent; antennæ pale ferruginous, the first joint blackish; prothorax barely visibly wider than long, the sides broadly, subevenly arcuate, slightly oblique and feebly though evidently sinuate basally to the right, rather sharp and subprominent angles; base subequal in width to the apex, feebly sinuate medially and margined laterally; apex feebly sinuate, with obtusely blunt angles; impressions obsolete; inner fovea long, obtusely impressed, the outer wanting, the intervening surface feebly, evenly convex, without trace of impression or carina; elytra two-thirds longer than wide, two-sevenths wider than the prothorax, parallel and distinctly arcuate at the sides, evenly rounded at apex, the humeral denticles nearly obsolete; subapical sinus broad and very feeble; striæ rather fine but deeply impressed, not at all punctulate, the scutellar very short; intervals broadly convex, more distinctly laterad; prosternum feebly impressed, strongly margined, but only at the extreme apex. Length (♀) 13.0 mm.; width 4.75 mm. Vancouver Island (Victoria),—Wickham.

This species differs from *validus* in its shorter and broader form, less elongate elytra, total absence of the feeble longitudinal impression near the hind thoracic angles, paler legs and paler antennæ.

Hypherpes anthrax n. sp.—Nearly as in the preceding in outline but more elongate, deep black, the legs black, the anterior tarsi feebly rufescent; elytra slightly alutaceous in the female; head nearly as in *responsor*, the mandibles smaller and black, the antennæ piceous-black; prothorax similar in outline to that of *responsor* throughout, except that the base is transverse medially, or only vestigially sinuate, and is margined throughout except at the middle; surface with the ruguliform lines more evident, the impressions very feeble; inner fovea long, deeply though obtusely impressed, the outer much shorter but distinct, forming a distinct carina between it and the sides; elytra three-fourths longer than wide, a fourth wider than the prothorax, the sides parallel and evenly arcuate; apex less obtusely rounded than in *responsor*, somewhat as in *validus*, the humeral denticles minute and subobsolete, the sinus almost completely wanting; striæ and intervals nearly as in the preceding, the short scutellar stria similarly deep; prosternum almost similar. Length (♀) 13.5 mm.; width 5.0 mm. Vancouver Island (locality unrecorded).

Allied to *validus*, but differing very much in the strong short sulcus near the hind thoracic angles and defining a distinct carina; in *validus* there is a short feeble impression in this position, usually not attaining the base and not delimiting a carina; the body is more elongate than in *responsor* and the mandibles are much smaller, resembling those of *validus*.

Hypherpes restrictus n. sp.—Small and narrow, moderately convex, shining, the elytra micro-reticulate but not dull; color rufo-piceous to nearly black, the legs black, the femora rufous; head slightly elongate, with distinctly prominent eyes, two-thirds as wide as the prothorax, the sulci strongly arcuate; mandibles moderate; antennæ not very stout, black, gradually ferruginous distally; prothorax but slightly though evidently wider than long, the sides subevenly rounded and finely reflexed throughout, straighter and oblique basally to the minutely prominent angles, which are more than right, owing to the rounding at the sides of the base, the latter distinctly narrower than the apex, sinuate medially and feebly margined laterally; apex moderately sinuate, with blunt angles; impressions evident but feeble, the surface also with subobsolete ruguliform lines; inner fovea moderate, not attaining the base, the outer a barely visible short impression, the carina wholly wanting; elytra two-thirds longer than wide, only a sixth wider than the prothorax, regularly rounded behind, the sides feebly arcuate; humeral denticles minute; subapical sinus extremely feeble; striæ rather fine, moderately impressed, minutely, closely and obscurely punctulate at the bottom, the scutellar short, fine and feeble to wholly obsolete, the ocellate puncture always completely wanting; intervals very feebly convex; prosternum faintly impressed along the middle, the process not distinctly margined. Length

(♂♀) 9.3–11.2 mm.; width 3.2–3.7 mm. Female the smaller and narrower. Colorado (Boulder Co., Leadville and Eldora) and Montana. Eight examples.

Hitherto considered by me to be the same as *longulus* Lec., and so described in my former revision, but it differs in its paler coloration and minutely prominent basal thoracic angles; there are similarly three joints of the hind tarsi grooved externally, but the groove of the third is rather faint.

Hypherpes luscus n. sp.—Body not quite so narrow and rather more parallel than in *restrictus*, black, with feeble piceous tinge, the legs rufopiceous; integuments similarly sculptured and shining; head three-fifths as wide as the prothorax, nearly as in the preceding, except that the eyes are smaller and less prominent; antennæ dark castaneous throughout, the third joint only a fourth longer than the fourth and slightly shorter than in *restrictus;* prothorax larger, a fourth wider than long, the sides less strongly arcuate, and more evenly so, almost to the basal angles, which are feebly prominent; base feebly sinuate medially, margined laterally, much broader than in the preceding and about as wide as the moderately sinuate apex; both impressions distinct, the ruguliform lines distinct; there is also a faint transverse impressed line parallel with the base; median stria short, deep; inner fovea rather short, not attaining base, the outer short and very feeble, the carina wanting; elytra more than three-fourths longer than wide, only just visibly wider than the prothorax, abruptly and obtusely rounded at tip, with evident sinus, the sides very feebly arcuate, the humeral denticles very minute; striæ strong, moderately impressed, not distinctly punctulate, the scutellar rather short and fine but usually visible, the puncture wanting; intervals very feebly convex; prosternum nearly as in *restrictus*. Length (♂♀) 10.0–11.5 mm.; width 3.35–3.9 mm. Female smaller, narrower and much less abundant than the male. Colorado. Seven specimens from the Levette collection.

Also allied to *longulus*, but differing in the broader prothorax, with minutely prominent basal angles and evident scutellar stria —said to be wanting in *longulus*.

Hypherpes elumbis n. sp.—Form shorter, with relatively broader and more oval elytra, piceous-black; under surface piceo-rufous; legs colored as in *restrictus;* lustre moderately shining; head elongate, three-fifths as wide as the prothorax, with rather long neck, moderate and somewhat prominent eyes and arcuate, converging sulci; antennæ nearly as in *luscus;* prothorax also as in *luscus* throughout in almost every particular, except that it is relatively smaller in size; elytra shorter, barely two-thirds longer than wide, nearly a fourth wider than the prothorax, less abruptly rounded behind, the parallel sides more arcuate, the sinus rather fainter, very feeble, the humeri similar; striæ finer than in the preceding, not evidently punctulate, the scutellar short, oblique and fine, without puncture; intervals feebly convex; prosternum nearly similar. Length (♀)

9.5 mm.; width 3.6 mm. A single specimen, unlabeled in the Levette collection but probably from Colorado.

This very small species also belongs to the same section as the two preceding and *longulus*, but it is more abbreviated and with shorter and more oblong-oval elytra, the latter relatively wider when compared with the prothorax; the base of the latter is not very obviously narrower than the apex.

In the three preceding species I can find no trace of the ocellate puncture of the scutellar stria, which is usually visible throughout the genus *Hypherpes;* it is probably also wanting in *longulus*.

Hypherpes intectus n. sp.—Form rather narrow and elongate, black, shining, the elytra strongly alutaceous in the male; legs and tarsi black, the anterior tarsi (♂) piceous; head moderate, slightly elongate, almost two-thirds as wide as the prothorax; eyes moderate, prominent, the sulci feebly arcuate, separated by a third the interocular width; antennæ fusco-ferruginous throughout; prothorax large, a fifth or sixth wider than long, widest near apical fourth, with the sides moderately reflexed, evenly and moderately rounded anteriorly, straighter and oblique basally and moderately reflexed, scarcely visibly sinuate toward the basal angles, which are obtuse, slightly blunt and not prominent; base scarcely sinuate medially, margined laterally and distinctly narrower than the moderately sinuate apex, the rather prominent apical angles blunt at tip; impressions both obvious; inner fovea long, broadly and moderately impressed, the outer very short, feebly impressed, the carina wanting; surface outside of the inner fovea flattened; elytra nearly four-fifths longer than wide, a fifth wider than the prothorax, regularly rounding at tip, the parallel sides broadly arcuate, rounding more at base, the sinus feeble though evident, the humeral denticles subobsolete; striæ rather fine but well impressed, impunctate, the scutellar short and oblique, the ocellate puncture small, adjoining the second stria; intervals broadly though evidently convex. Length (♂) 14.0–14.2 mm.; width 4.6–4.8 mm. Colorado (Boulder Co.).

Allied somewhat to *occultus*, from northern California, but larger, with more evident outer thoracic fovea and basally much less sinuate sides, with less fine and much more impressed elytral striæ and convex intervals; in *occultus* the intervals are flat.

Hypherpes vivax n. sp.—Similarly elongate, rather narrow and moderately convex, deep black, shining, the elytra (♂) not dull though strongly micro-reticulate; legs as in *intectus;* head moderate, slightly elongate, nearly two-thirds as wide as the prothorax, the eyes very moderate but prominent; sulci strongly converging and arcuate; antennæ fusco-ferruginous, the first joint nearly black; prothorax scarcely visibly wider than long, widest anteriorly, the sides broadly, feebly rounded, slightly converging though only straight basally, moderately reflexed; base transverse, margined laterally, with the angles obtuse but unrounded at tip,

just visibly subprominent, distinctly narrower than the apex, which is nearly as in *intectus*, the surface and foveæ also similar, except that the ruguliform lines are more visible and the transverse impressions obsolete; elytra nearly similar, fully three-fourths longer than wide, rather over a fifth wider than the prothorax, evenly rounded at tip, the broadly arcuate sides barely at all more rounding basally, far less so than in *intectus;* striæ similar in fineness and impunctate but less impressed and more abruptly incised, the scutellar short, scarcely oblique and wholly discal, the ocellate puncture larger. Length (♂) 14.3 mm.; width 4.9 mm. Wyoming (Yellowstone Park),—Wirt Robinson.

Resembles *intectus* but has the prothorax less arcuate at the sides, the second antennal joint shorter and the strial intervals flat and not sensibly convex; it also differs in the ocellate subscutellar puncture, which is small and virtually on the second stria in *intectus*, but larger and almost midway between the first and second striæ in *vivax*.

Hypherpes placerensis n. sp.—Form somewhat as in *parens* but larger, less narrow, with larger head and basally more sinuate sides of the prothorax, black, the under surface and legs piceous, very moderately convex, the elytra slightly alutaceous; head nearly three-fourths as wide as the prothorax, the eyes rather large and prominent, the sulci arcuately converging; antennæ somewhat thick, especially toward base, piceous-black, gradually fusco-ferruginous distally; prothorax large, a fifth wider than long, widest near apical third, the sides broadly rounded, rather coarsely reflexed, becoming broadly and very distinctly sinuate basally; base feebly sinuate medially, margined broadly toward the sides, the angles slightly more than right but sharp, though not prominent, distinctly narrower than the apex, which is nearly as in *intectus;* surface with feeble ruguliform lines, the impressions nearly obsolete; inner fovea long, broadly impressed but sharp at bottom, not attaining the base, the outer shorter, feeble though distinct and sometimes delimiting a feeble carina; elytra fully three-fourths longer than wide, a third wider than the prothorax, moderately rounded behind, the sides feebly arcuate, more so basally, rather widely reflexed, the gutter deep; humeral denticles small and feeble; striæ rather fine, impunctate, feebly impressed, sharply defined, the scutellar short, the puncture large and remote from the second stria; intervals not quite flat. Length (♂♀) 15.0–15.8 mm.; width 5.5–5.7 mm. California (Placer Co.). Taken by Koebele in August.

This species may be compared with *parens*, from the same regions, but differs as stated above; in *parens* the subscutellar puncture is smaller and adjacent to the second stria. One of the two specimens, the male, is pale red-brown throughout and seems to have the elytra flatter.

Hypherpes alamedæ n. sp.—Moderately elongate, more convex than any of the three preceding species, black, the legs black; elytra (♀)

slightly alutaceous, with finer micro-reticulation than in the preceding; head moderate, three-fifths as wide as the prothorax, with moderately prominent eyes and arcuate sulci; mandibles shorter than in the preceding types; antennæ fusco-ferruginous, piceous basally; prothorax large, a sixth wider than long, widest before the middle but narrowed only slightly thence anteriorly, the sides oblique basally, becoming briefly and barely visibly sinuate at the posterior angles which are right, not rounded and minutely subprominent; base margined except medially, evidently narrower than the apex, which is moderately sinuate, with obtusely rounded angles; surface with some ruguliform lines, the impressions very feeble, the anterior fine; inner fovea long, attaining the base, the outer very short and feeble, delimiting a short and very feeble carinule; elytra two-thirds longer than wide, a fourth wider than the prothorax, gradually and evenly rounded behind, the parallel sides broadly arcuate, the sinus long and very feeble; humeral denticles small and feeble; striæ rather fine, deep, extremely finely punctulate, the scutellar short, wholly discal, the puncture elongate; intervals nearly flat, convex on the apical declivity. Length (♀) 13.0 mm.; width 4.7 mm. California (Alameda).

Comparable only with *vicinus* Mann., than which it is much stouter, differing also in the feeble carina near the basal thoracic angles and in the decidedly more elongate third antennal joint; the sides of the prothorax are less evenly rounded, becoming more parallel before the middle.

Hypherpes mercedianus n. sp.—Form slender, rather notably convex, black, the epipleura and legs piceo-rufous, the abdomen obscure rufous; elytra feebly alutaceous; head slightly elongate, two-thirds as wide as the prothorax, the eyes moderate; antennæ longer than the head and prothorax, ferruginous, gradually piceous basally; prothorax slightly elongate, widest near apical third, the sides subevenly arcuate to a small sinus adjoining the right and unrounded basal angles, finely reflexed; base faintly margined only very near the angles, a little narrower than the feebly sinuate apex, the apical angles obtusely rounded; impressions feeble; median stria well impressed; inner fovea broadly, shallowly impressed, a fifth the total length; surface thence to the sides wholly unmodified; elytra almost twice as long as wide, not quite one-half wider than the prothorax, the sides feebly arcuate; striæ rather fine but deep, the external feebly punctulate, the scutellar wanting, represented only by a very short prolongation of the puncture; intervals feebly convex. Length (♂) 14.5 mm. width 5.0 mm. California (Merced Creek).

The type of this species was included with that of *sierranus* in my former revision, but it can be distinguished easily by its narrower and more convex form, much shorter basal sinus of the thoracic sides, shorter and feebler inner foveæ and very much more finely reflexed edges, and also by the obsolete scutellar stria. The dimensions of the Lake Tahoe female type of *sierranus* are 14.5 by 5.4 mm.

Hypherpes protensipennis n. sp.—Body narrow, very elongate, moderately convex, rather shining, black throughout above and beneath, the legs piceous; head nearly as in the preceding throughout, the eyes a little larger and more prominent than in *sierranus;* prothorax slightly elongate, widest near anterior third, the sides subevenly and moderately rounded, gradually becoming faintly sinuate basally, finely but strongly reflexed; base feebly sinuate medially, distinctly narrower than the apex, rounded laterally, causing the sharp basal angles to be slightly more than right, margined feebly only very near the angles; apex nearly as in *mercedianus;* impressions faint; median stria moderately impressed; inner fovea broadly impressed, less than a fourth the total length and not attaining the base; surface thence to the sides unmodified; elytra very nearly twice as long as wide, fully two-fifths wider than the prothorax, the parallel sides feebly arcuate, more rounding at base; striæ strong, rather deep and notably punctulate throughout, the scutellar moderate but distinct, oblique; intervals rather convex, especially toward the sides. Length (♂♀) 14.5 mm.; width 4.8–4.9 mm. California. Two Levette specimens, probably from the Sierran regions.

This species is also allied to *sierranus* and the type pair was included under the description of the latter; it differs, however, in its narrower outline, larger eyes, more finely reflexed thoracic sides and more elongate and narrower elytra, with more punctured striæ. From *mercedianus* it differs in the more elongate basal sinus of the thoracic sides, less convex elytra, with more punctured striæ and distinct scutellar stria and, from *annosus*, in its convex and not flat strial intervals.

Leptoferonia n. gen.

Although not distinguished by any apparent structural characters affecting special organs, there is a small group of relatively minute, more or less parallel species, allied to *angustus* Dej., which look decidedly out of place among the much larger species of *Hypherpes*, both in size and outline of the body, and it is probably well worth while to form a separate genus of them, although there is some diversity in several important characters, such as the margination of the thoracic base and presence or absence of a carinule near and parallel to the basal part of the thoracic side margins, which in all cases are very finely reflexed. The elytral striæ are complete and in most cases are equal throughout, well impressed and completely impunctate in every species known to me at present, excepting *pumilus*. In my previous studies I made two groups of the species, but this seems now unnecessary and *Leptoferonia*, as defined in the

table, is designed to include both groups, for the basal margination of the prothorax is diversified in each. Besides *inanis*, *angustus*, *crucialis*, *pumilus*, *humilis* and *ovicollis*, as known to me among my material, this genus will include also *longicollis* Lec., *caligans* Horn and *fuchsi* Schf., the latter not correctly identified in my previous work, having the basal thoracic angles not "obtuse" but minutely sharp and prominent; it will also include the three following species:

Leptoferonia larvalis n. sp.—Body very small, narrowly elongate-oval and convex, shining, pale testaceous in color; head notably small, barely three-fifths as wide as the prothorax, elongate, with very moderate and barely convex eyes; antennæ testaceous, moderately compressed, filiform, slender on the narrow side, extending barely beyond the thoracic base; prothorax very slightly elongate, the completely margined base fully as wide as the feebly sinuate apex and five-sixths the maximum width, the sides very broadly, moderately arcuate, a little less so basally, the basal angles obtuse but with the apex slightly prominent and not rounded, though not sharp at tip; foveæ single, parallel to the axis, rectilinear and not attaining the base, the external fovea and carina wanting; elytra oval, three-fourths longer than wide, at the middle barely a fifth wider than the prothorax; striæ moderately deep, scarcely different apically, the scutellar moderate but evident; punctures of the lateral series widely spaced submedially; intervals broadly, not strongly convex. Length (♀) 6.65 mm.; width 2.35 mm. California (Hoopa Valley, Humboldt Co.).

Allied to *humilis* and placed with the female type of that species in my former study, but differing in its more slender form, narrower head, smaller and less prominent eyes and rather more slender antennæ; the elytral apex is more obtuse and, in both, the sinus is obsolete; the elytral striation is similar in the two; the sides of the prothorax are a little more sinuate just before the basal angles in *humilis*.

Leptoferonia fugax n. sp.—Elongate, slightly suboval, convex, polished, piceous-black, the under surface and legs dark rufous; head elongate, not quite three-fourths as wide as the prothorax, the eyes well developed, slightly prominent, the anterior sulci strongly anteriorly converging; antennæ testaceous, somewhat as in the preceding but extending well behind the thoracic base; prothorax barely longer than wide; base wholly margined, biarcuate, somewhat wider than the very feebly sinuate apex; sides parallel, feebly arcuate, rather rapidly but feebly oblique basally to the obtuse though prominent and sharp basal angles; single subbasal foveæ small, short and feeble; medial stria rather deep, biabbreviated; elytra two-thirds longer than wide, not quite a fourth wider than the prothorax, obtuse at tip, the parallel sides but feebly arcuate, more so near the base, the humeri strongly denticulate; striæ deep, a little shal-

lower apically, the scutellar very short; intervals strongly convex throughout the width, less so apically; metasternal sides, and the abdomen laterobasally, with small and very feeble sparse punctures. Length (♂) 6.8 mm.; width 2.65 mm. California (locality unknown; the label reads "Cal.," with a vertical red line to the left).

This species was erroneously described under the name "*fuchsi* Schf." (Mem. Col., IV, 1913, p. 128). The basal thoracic angles in *fuchsi* are described as obtuse, and the size is materially larger; *fugax* is much smaller and slightly stouter than *longicollis* Lec., and with feebler sinuation of the sides of the prothorax before the basal angles.

Leptoferonia inopina n. sp.—Body moderately stout, oblong-suboval, convex, shining, piceous-black, the under surface and legs dark rufous; head elongate, two-thirds as wide as the prothorax, the eyes rather large but only moderately prominent; anterior sulci strongly converging; antennæ obscure testaceous, rather strongly compressed, slender on the narrow side, extending slightly behind the thoracic base; prothorax widest near apical third, fully as long as wide, rather narrower posteriorly than in the preceding; base feebly sinuate medially, transverse, margined only in lateral fourth and evidently narrower than the apex, which is subsinuously truncate; sides rather strongly rounded anteriorly, gradually less arcuate and broadly oblique thence to the basal angles, which are obtuse and slightly rounded, not in the least prominent; impressions feeble, the posterior evident, the stria finely impressed, not entire; subbasal fovea rather long, finely, deeply impressed, linear and longitudinal; posterior marginal puncture far before the hind angles; elytra nearly two-thirds longer than wide, barely a fifth wider than the prothorax, rapidly obtusely rounded behind, the sides feebly arcuate, more so basally, the humeri scarcely denticulate; striæ even throughout, rather deeply impressed, the scutellar very short; intervals rather strongly convex; prosternal process not evidently margined. Length (♂ ♀) 8.0–8.5 mm.; width 2.8–2.9 mm. Oregon (Josephine Co.),—Nunenmacher.

This is a remarkably isolated species in the *longicollis* subsection, in having the posterior lateral thoracic puncture far before the basal angle as in *Ferestria obsoleta* Say, and it differs greatly from *fuchsi*, *humilis* and *fugax* in having the base not margined except at the sides; from *longicollis* it differs at least in the obtuse and slightly rounded basal angles of the prothorax.

Gastrellarius n. gen.

The species of this genus are small, peculiarly ventricose, with deep elytral striæ and a single dorsal puncture, on the third interval near the second stria and more or less near the middle of the length;

the subapical sinus is feeble though evident. The antennæ and legs are slender, the head moderate, with rather prominent eyes, the thoracic foveæ single and linear, the prosternal process unmargined, the hypomera narrow, and the metasternum and latero-basal parts of the abdomen are more or less punctured. The last ventral segment has a single apical puncture at each side in the male, two in the female. LeConte alludes to a very faint elevation toward the abdominal apex in the male, but I have been unable to perceive anything at all definite in this regard. The fourth palpal joint is longer than the third, gradually pointed apically, and the mentum tooth is long and with the apex blunt. The species will probably prove to be somewhat numerous, the five at hand being easily separable as follows:

Elytral striæ completely impunctate.....2
Elytral striæ punctured; body very small.....5
2—Anterior tarsi of the male somewhat strongly dilated, the second and third joints transverse. Body moderately stout and convex, polished, deep black, piceous-black beneath, the discal parts of the abdomen and the legs rufous; head not quite two-thirds as wide as the prothorax, the eyes rather large, moderately prominent; anterior sulci parallel, deeply impressed; antennæ testaceous, slender, nearly half as long as the body; prothorax rather large, a fourth wider than long, the base transverse, two-thirds the maximum width and fully as wide as the deeply sinuate apex, widest near apical third, the sides strongly, subcircularly rounded, abruptly sinuate at base, abruptly reflexed, the basal angles rather less than right, sharp and slightly prominent; apex imperfectly margined; impressions feeble; stria deep, subentire; basal parts punctate within the long deep foveæ; elytra very evenly oval, the sides not more strongly rounded basally, one-half longer than wide and two-fifths wider than the prothorax; striæ very deep, the scutellar long, deep, joining the first, the intervals strongly convex. Length (♂) 8.5 mm.; width 3.3 mm. Indiana.....**atronitens** n. sp.
Anterior tarsi of the male feebly dilated, the triangular second joint not wider than long.....3
3—Hind body strongly inflated, the sides of the elytra more rapidly rounding basally. Color blackish-piceous, polished in both sexes; under surface and legs dark rufous; head fully two-thirds as wide as the prothorax, with moderately large and prominent eyes, the anterior sulci feebly converging; antennæ rufous, rather long and slender; prothorax barely at all wider than long, the base (♂) fully as wide as the apex, or (♀) somewhat narrower; apex sinuate; sides finely, sharply reflexed, strongly rounded, at base nearly as in the preceding, the angles slightly acute and prominent, scarcely more than right in the female; surface and foveæ nearly as in *atronitens;*

elytra shorter, barely two-fifths longer than wide, barely less than one-half wider than the prothorax, the striæ deep and smooth and the intervals rather strongly convex, equally in the two sexes; scutellar stria moderate, free posteriorly. Length (♂ ♀) 7.7–8.5 mm.; width 3.3–3.6 mm. Indiana. [*Feronia fastidita* Dej., and *Stomis americana* Laf.] ..... **honestus** Say

Hind body very moderately inflated, the elytra narrower than in *honestus* and differing in having the sides not more strongly rounding basally 4

4—Form suboblong-oval, rather convex, polished, piceous, the elytra more rufous; under surface and legs rufous; head more than two-thirds as wide as the prothorax, the eyes large and rather prominent, the anterior sulci moderate, straight, just visibly converging and extending posteriorly to a point opposite the anterior limit of the eyes; antennæ ferruginous, half as long as the body; prothorax but just visibly wider than long, widest at apical two-fifths; base evidently wider than the apex, which is only very feebly sinuate; sides subevenly rounded, abruptly becoming straight and parallel in about basal seventh or eighth, the angles right and sharp, the surface and foveæ nearly as in the two preceding; elytra one-half longer than wide, at the middle about three-sevenths wider than the prothorax, evenly oblong-oval, the sides evenly arcuate, the striæ deep, smooth, the scutellar rather long and generally joining the first; intervals strongly convex. Length (♂) 8.0 mm.; width 3.25 mm. A single example from the Levette collection, probably collected in Indiana. **scolopaceus** n. sp.

Form, coloration, lustre and general characters as in *scolopaceus* but smaller and narrower; head narrower and with the anterior sulci coarser, longer, more irregular and extending posteriorly to a point nearly opposite the middle of the eyes, feebly converging; antennæ as in the preceding but much shorter, slender; prothorax as in *scolopaceus*, except that the base is slightly narrower than the apex and that the rounded sides posteriorly are gradually and more broadly sinuate, not becoming quite parallel even at the angles, which are somewhat more than right and sharp, though not at all prominent; elytra in outline and proportion nearly as in the preceding but a little shorter, the striæ and intervals similar, except that the scutellar stria is obsolete, represented only by a feeble oval prolongation of the ocellate puncture. Length (♀) 7.0 mm.; width 2.7 mm. Indiana ..... **deficiens** n. sp.

5—Body strongly ventricose, polished, black or piceous, the elytra sometimes rufous; under surface piceous, the legs pale rufous, the femora shaded slightly darker basally; head rather small, three-fifths as wide as the prothorax, elongate, the eyes well developed though not very prominent; anterior sulci deep, punctured, almost parallel; antennæ ferruginous, slender; prothorax about as long as wide, the sides strongly rounded, abruptly sinuate, the angles acute, minutely prominent and everted; base margined throughout, rather wider than the apex, which is barely visibly sinuate; surface nearly as in the preceding species, except that there are no subbasal punctures;

elytra short, a third longer than wide, nearly one-half wider than the prothorax, the sides evenly rounded; striæ rather coarse, very deep, the scutellar short though evident; intervals strongly convex; anterior tarsi of the male only feebly dilated. Length (♂ ♀) 5.0–5.7 mm.; width 2.3–2.6 mm. North Carolina (Black Mts.),—Beutenmüller ..... **blanchardi** Horn

That so large a proportion of the above species should have been taken in Indiana alone, shows that there are probably a considerable number of species in the genus. Those above defined are all seemingly quite distinct among themselves, the only one to which any doubt may attach being *deficiens*, but the type being a female and much smaller and narrower than the male type of *scolopaceus*, the general rule in the genus being just the opposite, together with the radical differences in the scutellar stria, would seem to show that we have to deal with two separate species. The thoracic base is generally wholly unmargined, but a fine margin at each side appears in *honestus*, and in *blanchardi* there is a strong and entire basal margin; these differences are interesting to note in connection with the variability of the basal margination in *Leptoferonia*.

Anaferonia n. gen.

The numerous species of this genus present a rather uniform appearance superficially, leading LeConte to pronounce them "opinionative," but a large number of them at least cannot be so regarded. They form a somewhat discordant element in the Pterostichid series, being considered a part of *Molops* and later of *Evarthrus* by LeConte, but transferred to *Pterostichus* by Horn, where their peculiar habitus causes them to stand out as a very inharmonious group. The fact is that they form a distinct genus, allied much more closely to *Evarthrus* than to *Pterostichus*. The body is convex and stocky and generally polished in both sexes, but sometimes with opaque elytra in the female. The head is well developed, the antennæ not very thick, and the fourth palpal joint is truncate and somewhat shorter than the third as a rule. As shown in *pimalis*, the mentum is peculiar in sloping steeply in about anterior half, the hind margin of the slope forming a prominent line, the apex deeply sinuate and the lobes rather narrowly rounded; the prosternal process is broad and unmargined. The prothorax is abruptly sinuate and constricted at the sides near the base, the hind angles sharp and more

or less prominent as a rule, and the foveæ are always bistriate. The elytral striæ vary greatly from deep to almost obsolete, and are more or less evidently punctate; the scutellar stria varies from distinct to obsolete. There are no peculiar modifications at the abdominal apex in the male and the anterior tarsi are well dilated in that sex; there is a single terminal puncture at each side in both sexes.

In the statement given below I have been obliged to identify the published species from the short original diagnoses and may have mistaken some of them, but so far as known to me our species are as follows:

Prothorax parallel at the sides for a considerable distance before the basal angles, which are right.....2
Prothorax very briefly constricted at base, the angles notably obtuse. 10
2—Scutellar stria long, uniting with the first stria at a considerable distance behind the scutellum. Body rather narrow and elongate, strongly convex, polished, blackish-piceous, obscure rufous beneath, the epipleura and legs paler rufous; head more than three-fourths as wide as the prothorax; eyes large, moderately prominent; anterior sulci broadly impressed, parallel; antennæ obscure ferruginous and rather stout, extending well behind the thoracic base; prothorax only a fourth wider than long, the base four-sevenths the maximum width, two-thirds as wide as the apex, which is feebly sinuate, with well rounded angles; sides broadly, evenly arcuate, abruptly sinuate at basal eighth, the sides thence diverging to the very sharp basal angles; anterior marginal incised line deep, entire; stria, extending from it to the base, deep; anterior impression obsolete, the posterior evident near the foveæ, which are moderate, impunctate; fine lateral carina strong and conspicuous; elytra oval, two-thirds longer than wide, about a sixth wider than the prothorax, the sinus very feeble, the lateral series not interrupted; striæ deep, distinctly and closely punctate, the dorsal puncture large, just behind the middle and on the outer side of the second stria; seventh stria finer and less impressed than the sixth but distinct; prosternum feebly impressed; under surface impunctate. Length (♂) 12.7 mm.; width 4.2 mm. Iowa.....**distincta** n. sp.
Scutellar stria extremely short, or, as a general rule, wholly obsolete...3
3—Elytra sometimes slightly narrower than the prothorax, the sides of which are more strongly rounded than usual, the base but little more than half the maximum width. Body rather elongate, convex, polished, black; under surface black, the legs piceous-black; head fully three-fourths as wide as the prothorax, the sulci slightly arcuate and feebly converging; prothorax two-fifths wider than long, the sides strongly arcuate, abruptly sinuate near the base, the sides thence parallel and straight to the right angles; base four-sevenths the maximum width, less than three-fourths as wide as the broadly

sinuate and strongly margined apex; subbasal impression feeble but evident, not deeper near the foveæ, which are impressed, the bottom a long fine incised and outwardly arcuate line, curving outwardly at base; lateral carina very fine; elytra elongate-oval, sometimes a little narrower than the prothorax, the striæ impressed, finely, not closely punctate, the sixth slightly, the seventh much, finer and less impressed; scutellar stria wholly wanting. Length (♂) 12.3–13.0 mm.; width 4.2–4.5 mm. New Mexico (Las Vegas). Three examples..... **ovipennis** Lec.

Elytra never as narrow as the prothorax, the base of which has much more than half the maximum width.....4

4—Elytral striæ extremely fine and not impressed, the sixth and seventh barely traceable; intervals flat.....5

Elytral striæ distinctly impressed, the intervals more or less convex...6

5—Form rather short and stout, black, shining, the elytra just visibly alutaceous; legs piceous-black; head rather longer than wide, fully two-thirds as wide as the prothorax; antennæ black; prothorax not a third wider than long, rather large, the apex sinuate, broadly, strongly margined; foveæ with a long inner impressed line, curving outward at base, then forward at some distance from the lateral edge and for less than half the length of the inner sulcus, the carina obsolete; elytra one-half longer than wide, a fourth wider than the prothorax, oval, with the sides rapidly rounding inward at the humeri; subapical sinus broad and very shallow; striæ with fine, feeble and somewhat irregular punctulation, the scutellar wanting; metepisterna much wider than long, the epimeron more than half as large as the episternum, as usual in this part of the Pterostichid series; transverse sulcus toward the sides of the first abdominal segment conspicuous. Length (♂) 11.8 mm.; width 4.4 mm. New Mexico (Sta. Fé),—Miss Greene..... **substriata** Lec.

Form more elongate, black, shining, the elytra feebly alutaceous in the female; under surface and legs black; head barely elongate, nearly three-fourths as wide as the prothorax; eyes well developed, the sulci short, deep and parallel; antennæ piceous-black, extending to the thoracic base; prothorax slightly over a third wider than long; apex sinuate but not margined, the usual deep incised line wanting, except toward the sides, the latter less coarsely reflexed than in the preceding, the part between the abrupt constriction and the base straight, diverging and fully a sixth the total length; foveæ nearly as in the preceding but deeper; general surface with more evident fine ruguliform lines; elytra three-fourths longer than wide, barely a fifth wider than the prothorax, the arcuate sides more rounded at base; subapical sinus broad and shallow but evident; striæ consisting of series of very fine, irregularly and well spaced punctules, the scutellar subobsolete; intervals perfectly flat and having a few feeble irregular transverse creases. Length (♀) 12.8 mm.; width 4.35 mm. Mexico (Colonia Garcia, Sierra Madre Mts., Chihuahua),—Townsend..... ***evanescens** n. sp.

6—Body short and strongly ventricose, less so in the male. Deep black and polished in both sexes, the legs slightly piceous; head relatively

not so large as usual, three-fifths as wide as the prothorax or less; eyes moderate, the sulci coarse, deep, subparallel and slightly arcuate; antennæ fuscous, blacker basally; prothorax two-fifths (♂) to one-half (♀) wider than long; base (♀) two-thirds the maximum width, less in the male; apex feebly sinuate, broadly and strongly margined; foveæ elongate, deeply impressed, the bottom a deeply incised curved line bent anteriorly along and close to the parallel basal part of the sides, the sides strongly rounded, the basal part straight and parallel for a seventh the total length; elytra (♀) less than one-half longer than wide and nearly a third wider than the prothorax, or (♂) one-half longer than wide and a fifth wider than the prothorax, oval, the sides more rounding at base, the sinus broad but rather deep; striæ well impressed, the sixth and seventh much less impressed and finer, the strial punctures strong and moderately though irregularly close-set; intervals broadly convex internally; scutellar stria more or less evident but extremely short. Length (1♂, 5♀) 10.7–12.8 mm.; width 4.2–4.9 mm. Texas.

pantex n. sp.

Body narrower and less ventricose.....7

7—Elytra strongly shining in both sexes, this assumed in the case of *vernicata*.....8

Elytra strongly alutaceous to subopaque in the female.....9

8—Body convex, deep black and very highly polished; under surface and legs deep black, the coxæ rufescent as usual; head large, three-fourths as wide as the prothorax, longer than wide; eyes large, rather prominent, the sulci deep, subparallel; antennæ fuscous, blacker basally, extending behind the thoracic base, strongly compressed and with the joints inflated apically on the narrow side as usual: prothorax less than a third wider than long, of the usual form, the sides evenly rounded to the subbasal constriction, thence just visibly converging and straight to the right angles; apex feebly sinuate, broadly, strongly and convexly margined; foveæ smooth, very deep, linear, the deeper line curving at base only to inclose the posterior marginal puncture, the carina wholly wanting; sides rather finely reflexed; surface very smooth; elytra very evenly oval, three-fifths longer than wide, a fifth wider than the prothorax; sides but little more rounding basally to the obtuse humeri; subapical sinus broad but very evident; striæ only moderate in coarseness and impression, the sixth slightly, the seventh much, finer, the scutellar extremely short; strial punctures fine and widely spaced; intervals feebly convex, the eighth much broader than any other. Length (♂) 11.8 mm.; width 4.4 mm. New Mexico (Alamogordo),—H. L. Shantz.

vernicata n. sp.

Body nearly as in the preceding but a little larger and somewhat stouter, black, shining; under surface piceous, the legs obscure rufous: head large and elongate, three-fourths as wide as the prothorax; eyes moderate and rather feebly convex, the sulci coarse, deep, parallel and contorted; antennæ piceous; prothorax much shorter and more transverse than in *vernicata*, almost one-half wider than long; apex more deeply sinuate, the margin broad and flat, defined by a feeble

fine incised line; sides arcuate, diverging and straight from the deep constriction to the hind angles, which are less than right; surface with some ruguliform lines, the anterior impression distinct and angulate behind the flat margin, the posterior rather deep transversely between the foveæ, which are very deep, the sharply lineate bottom outwardly curved basally, returning along the basal part of the sides, where there is a feeble carina defined thereby; elytra almost one-half longer than wide, about a fourth wider than the prothorax, oblong-oval, the sides very moderately arcuate, the humeri pronounced; subapical sinus broad but very evident; striæ deeply impressed, the seventh notably feeble, the scutellar extremely short; punctures not fine, deep, rather widely but irregularly spaced; intervals broadly convex except laterally; dorsal puncture at three-fifths. Length (♀) 13.3 mm.; width 4.7 mm. Arizona (southern)...**pimalis** n. sp.

Body smaller and more slender, black when mature and shining; head large, not quite three-fourths as wide as the prothorax, not elongate; eyes moderate, not very convex, the sulci and antennæ somewhat as in the preceding; prothorax fully two-fifths wider than long, the sides less evenly rounded, more rapidly converging behind the middle, similarly constricted, with the basal slightly diverging part about an eighth the total length; apex feebly sinuate, the margination complete but feebly defined; anterior and posterior transverse impressions both distinct, the former subangulate but rather obtusely impressed; foveæ and carina nearly as in *pimalis;* elytra three-fifths longer than wide, only very slightly wider than the prothorax, the sides evenly and broadly arcuate; striæ rather deeply impressed, the outer but slightly less so and equally punctate, the punctures very distinct, moderately separated; intervals broadly convex; scutellar stria wanting; subapical sinus shallow but obvious. Length (♀) 12.4 mm.; width 4.2 mm. Kansas. Headwaters of Arkansas River—Say. [*Molops lixa* Lec.].....**constricta** Say

9—Form a little stouter than the two following, rather less convex than usual, black, the elytra opaque in the female; legs piceous-black; head not elongate and with the neck short, five-sevenths as wide as the prothorax; eyes well developed and rather convex, the sulci parallel; antennæ as usual, piceous in color; prothorax two-fifths wider than long, the sides very evenly rounded from apex to the constriction, thence parallel for a seventh the total length, the angles right but rather blunt; apex feebly sinuate, the border flat and with the defining line fine though entire; median stria deep, broadly impressed; surface without transverse impressions, the foveæ very definitely bilineate, the inner sulcus curving forward from the basal recurvature and deep, defining a distinct cariniform elevation; elytra nearly one-half longer than wide, oblong-oval, barely a fifth wider than the prothorax, the subapical sinus almost obsolete, subrectilinear; striæ coarse and deep, the sixth feebler and the seventh very fine, the punctures strong and rather close-set; scutellar stria extremely short; intervals but very feebly convex; each elytron in the type has a dorsal puncture just before and another just behind the middle of the length—probably an adventitious character.

Length (♀) 12.3 mm.; width 4.5 mm. A single specimen, unlabeled in the Levette collection, but probably taken in Indiana.

latebrosa Lec.

Form less stout, the size much smaller, black, more piceous beneath, the legs piceous-black; elytra opaculate in the female; head not elongate, with short neck, fully three-fifths as wide as the prothorax, the eyes moderate and rather prominent; sulci slightly converging, nearly straight; antennæ piceous, of the usual structure; prothorax almost one-half wider than long, the sides very evenly rounded from apex to the constriction, thence straight and parallel to the angles, which are right, slightly blunt at tip; apex feebly sinuate, the margination perfectly flat and defined by an entire though extremely fine and feeble incised line, which, quite exceptionally, is broadly angulate; anterior impression subobsolete, the posterior distinct, the basal region longitudinally rugose; foveæ nearly as in the preceding, except that the external recurvature is shorter and does not define a distinct carina; elytra nearly one-half longer than wide, oval, a fifth wider than the prothorax, the sides very evenly and rather strongly arcuate; subapical sinus short and very feeble; striæ fine, feebly though sharply impressed, the seventh feeble, the scutellar very short; punctures fine and inconspicuous; intervals but just visibly convex; dorsal puncture small and at three-fifths. Length (♀) 10.5 mm.; width 3.85 mm. Texas (locality unrecorded).

pudica n. sp.

Form rather more elongate, moderately convex, shining, the elytra alutaceous, probably shining in the male; color piceous-black, the under surface and legs dark rufous; head longer than wide, with the neck very long in comparison with the two preceding, very nearly three-fourths as wide as the prothorax; eyes moderately prominent; antennæ fusco-rufous; prothorax fully two-fifths wider than long, the sides rather strongly reflexed, almost evenly arcuate from apex to the subbasal constriction, thence parallel and straight to the right and rather sharp angles; apex broadly sinuate, the margination slightly convex, defined by a fine though distinct incised line; anterior impression feeble, just behind the margination, the posterior deep and conspicuous from side to side; foveæ not very deep, the inner incised line not coarse, recurved at base, the recurvature closely paralleling the straight part of the sides; surface with a few ruguliform lines; elytra three-fifths longer than wide, only very slightly wider than the prothorax, the sides evenly arcuate; subapical sinus broad and very feeble; striæ rather sharply impressed, the seventh feeble, the scutellar extremely short; punctures small but distinct; intervals feebly convex, somewhat crenulated by the punctures; dorsal puncture at three-fifths. Length (♀) 11.7 mm.; width 4.0 mm. Arizona (locality unrecorded).....**papago** n. sp.

10—Fine incised line parallel to the thoracic apex distinct, delimiting a convex margination. Body unusually narrow and elongate, deep black and polished throughout, the legs obscure, the femora and trochanters brighter, rufous; head somewhat elongate, nearly three-fourths as wide as the prothorax; eyes rather prominent, the sulci

subparallel; antennæ fusco-testaceous; prothorax not over a fourth wider than long; base distinctly sinuate medially and arcuate at each side; apex more than usually sinuate; sides very evenly rounded from apex to the moderately abrupt constriction, thence parallel and straight for a tenth or twelfth the total length to the angles, which are more than right though scarcely blunt; surface with a few wavy ruguliform lines, smooth at base; transverse impressions both distinct, the anterior arcuate; foveæ somewhat rounded, deep, smooth, the inner incised line short and fine, not attaining the base; between the foveæ and the sides there is a strong straight carina along the parallel parts of the sides, its posterior end not at all inflexed; elytra three-fifths longer than wide, barely a fifth wider than the prothorax, oblong-suboval, the subapical sinus long and extremely feeble; striæ deep, abruptly impressed, with the punctures along the bottom scarcely distinguishable, the scutellar wanting, the seventh distinct; intervals but just visibly convex. Length (♂) 13.0 mm.; width 4.2 mm. Iowa.....**iowana** n. sp.

Fine incised line along the thoracic apex wholly wanting as a rule, except laterally.....11

11—Prothorax of peculiar outline, the sides parallel and feebly arcuate, more rounding apically and rather rapidly, arcuately converging well behind the middle to the rather broadly rounded sinus, thence becoming subparallel and straight for a very short distance to the angles, which are barely more than right. Body rather small in size, not stout, convex, polished and piceous, the abdomen and legs rufous; head two-thirds as wide as the prothorax, the eyes only very feebly convex; prothorax a third wider than long; base transverse and rectilinear; posterior impression shallow but evident, the anterior obsolete; foveæ large and irregular, extending inwardly almost to the middle, the inner incised line short, fine and far from the base, the carina along the postero-lateral margin fine but distinct; elytra over one-half longer than wide, a fourth wider than the prothorax, oval, the sinus long and very shallow; striæ rather coarse and deeply impressed, finely punctate, the scutellar very short or wanting; intervals rather strongly convex. Length (♂) 11.5 mm.; width 4.0 mm. Kansas.....**abdominalis** Lec.

Prothorax of regular outline, the sides subevenly arcuate from apex to the constriction.....12

12—Sides of the prothorax more strongly arcuate, more rapidly curving inward posteriorly to the constriction. Body rather narrow and elongate, shining, the elytra feebly alutaceous in the female, black, the legs piceous; head fully two-thirds as wide as the prothorax, the eyes prominent; antennæ somewhat thicker basally than usual; prothorax two-fifths wider than long, the subbasal sinus at the sides broadly rounded, not at all abrupt, the sides thence becoming scarcely parallel through the extremely short distance to the base, which is transverse; surface with the transverse impressions feeble, the anterior rather close to the apex; foveæ consisting of the usual two broadly and deeply impressed lines confluent basally, the outer the shorter, half as long as the inner, the surface between it and the

sides convex but scarcely cariniform, the strong postero-marginal puncture very slightly in advance of the obtuse hind angles; elytra three-fifths longer than wide, a fifth wider than the prothorax, the sinus short and shallow but distinct; sides arcuate, very moderately reflexed, striæ moderately impressed and with moderate though very distinct and rather close-set punctures, the seventh finer but punctate, the scutellar more or less evident though comminuted. Length (♂♀) 12.0–13.0 mm.; width 4.2–4.5 mm. Arkansas. Four examples..... **incisa** Lec.

Sides of the prothorax less rounded and more regularly oblique from apex to constriction, the latter very broadly rounded and in no way abrupt, the extremely short sides thence to the angles really forming part of the sinus. Body not quite so elongate and more convex than in the preceding, deep black, the legs piceous-black; elytra highly polished in the male; head with rather long neck, somewhat elongate, nearly three-fourths as wide as the prothorax; eyes rather prominent, the anterior sulci long, slender, perfectly straight and feebly converging; antennæ rather long, piceous, not much stouter basally; prothorax a third wider than long; base transverse, sinuate medially; apex feebly sinuate; surface with some transverse wavy rugulation, the anterior impression very feeble, the posterior scarcely evident medially; median stria abbreviated basally but almost attaining the apex; foveæ large and broadly impressed, the inner incised curved line interrupted basally, the part along the basal margin evident and the external line deep as in the preceding; elytra one-half or more longer than wide, almost as in the preceding, except that the scutellar stria is obsolete and the intervals are more convex, the striæ deeper. Length (♂) 11.8–12.3 mm.; width 4.25–4.4 mm. Pennsylvania. Two examples..... **fausta** n. sp.

Having been obliged to make the above identifications of LeConte's species from the very short and undiscriminative original descriptions, as stated above, it may be that some of them do not strictly accord with the types; it would be scientifically advantageous, however, if under the circumstances, the identifications here used could be made the permanent record of these species, especially as original type labels in the LeConte cabinet are known in many cases to have been shifted accidentally from one specimen to another during the many years of its existence. At any rate, the above descriptions are full enough for identification and embody passably well all the characters originally published by LeConte.

Cyclotrachelus Chd.

There is at hand at present but a single species assignable to this genus, and to avoid ambiguity, I have therefore assumed it to be typical. *Roticollis* seems to be peculiar to southern Florida

and is usually identified as *faber* Germ., in collections, but in all available descriptions of *faber*, including that of the synonymous *tenebricosa* by Dejean, the elytral striæ are said to be fine; they are called "peu marquées" by the latter author. Now in *roticollis* the striæ are conspicuously coarse and deep. The prothorax in *roticollis* is fully as long as wide as a rule, but, in describing *faber*, LeConte states that it is transverse. So several species have without doubt been confused under the name *faber*. In this genus, as represented by *roticollis*, the head is much less developed than in *Anaferonia*, the prothorax more elongate and with single foveæ and with shorter and feebler basal constriction. The palpi are still more slender and differ from those of any other genus near *Evarthrus* in having the fourth joint longer than the third and rounded at tip. Besides *unicolor*, *rotundatus* and *brevoorti*, which are much larger in size, it is probable that *Evarthrus vinctus* Lec., will also enter this genus, and the original outline of its characters is given below for comparison. It is highly probable that the Mexican *Evarthrus constrictus* of Bates, also belongs to this genus.

Body shining, convex and deep black, the legs rufo-piceous; head three-fifths as wide as the prothorax, elongate-triangular, the neck short; eyes notably large, rather prominent; anterior sulci subparallel, slightly arcuate; antennæ fusco-testaceous, blackish basally and extending to the thoracic base; prothorax as long as wide, much wider just before the middle than at apex, the sides evenly rounded from apex to the very short and not abrupt basal sinus, the angles obtuse and not in the least prominent; base broadly sinuate except laterally, less than three-fifths the maximum width and about three-fourths as wide as the apex, which is feebly sinuate and wholly unmargined, except finely toward the sides; surface smooth, with very few transverse ruguliform lines, the anterior impression feeble and diffuse, the posterior obsolete; median stria deep, biabbreviated, deepest at its posterior end, foveæ single, long, deep, impressed, subarcuately linear, not attaining the base; externally, there is no modification of the surface, but at the basal margin, near the posterior puncture at the angle, there is a small isolated rounded puncture; elytra oblong-oval, one-half longer than wide, nearly a third wider than the prothorax, the sinus rather short and deep; striæ strong and deeply impressed, becoming very fine and almost punctureless posteriorly, strongly punctured, the scutellar wanting, the sixth feebler, the seventh very fine, the submarginal very close to the eighth; intervals broadly convex; dorsal puncture at three-fifths. Length (♂♀) 12.5 mm.; width 4.2 mm. Florida (locality unrecorded and also taken at Dunedin by Mr. Blatchley).

roticollis n. sp.

Body shining, black; prothorax not wider than long, not at all narrowed at apex, which is scarcely emarginate, very much narrowed behind, where it is only half as wide as at apex, moderately rounded on the sides, sinuate posteriorly; angles acute, prominent; interior basal impression long, the exterior extremely short, almost obsolete; carina obsolete; anterior transverse line and impression wanting. Length 10.7 mm. Georgia (Nakutshi, Habersham Co.).

vinctus Lec.

These two species seem to differ considerably in the form of the prothorax, especially at apex and about the hind angles, and *vinctus* is somewhat the smaller in size.

Megasteropus n. gen.

A single very large species, one of the largest of our Pterostichinæ, alone constitutes this genus as far as known. It is characterized by a notably large head, with well developed mandibles and very deep superciliary groove, convex and deeply constricted prothorax, with very much deflexed apical angles and total absence of normal punctuation of the elytral striæ. I at first thought that *Feronia heros* Say, might also enter the genus, but, as shown below, this is highly improbable. The type may be described as follows:

Body very large, stout, strongly convex, deep black, shining, the elytra barely less so even in the female; head large, the eyes rather prominent; sulci very coarse and deep, parallel; antennæ (♀) thick basally, only a fourth longer than the head; mandibles striate only anteriorly; prothorax with transverse ruguliform lines, fully one-half wider than long, equally wide at base and apex, the sides thickly but not broadly margined, strongly, subevenly rounded, very rapidly oblique posteriorly to the deep stricture, thence strongly diverging to the slightly blunt but prominent angles; apex strongly sinuate, the margination flat and well defined by an incised line; stria fine, deep, broadly impressed, much abbreviated at base, which is transverse and three-fourths the maximum width; anterior transverse impression obsolete, the posterior rather deep; foveæ very deep, smooth at the bottom, the inner line long, the outer short, the carina obtusely prominent; elytra oblong-oval, three-fifths longer than wide, a fourth or fifth wider than the prothorax, deeply impressed along the basal margin, the extremely fine and feeble superficial striæ being merely a succession of short lineiform and barely visible comminution, not having the nature of punctures; lateral series lying along a deep coarse impression, uninterrupted medially. Length (♀) 26.0–27.0 mm.; width 8.3–9.7 mm. Texas. Levette collection. . . . . **gigas** n. sp.

This remarkable species I have had for many years under the

name *heros* Say, but on examining the description of Say, which is repeated under the next genus, it would seem to be conspicuously different. The striæ in *heros* are said to be fine but acute and punctate, the punctures obsolete posteriorly. In *gigas* the striæ are extremely and equally fine throughout the length and are composed, in the female at least, of minute and short lineiform dashes, in no way resembling punctures and equally evident from base to apex —similar to the apical part of the striation in the female of *Eumolops ampla*. In the drawing of an assumed *heros*, from Texas, given by LeConte (J. Ac. Phila., IV, t. 4, f. 2) the thoracic base is much narrower than the apex and the side margins are much more widely reflexed; in a drawing such as this the elytral sculpture of *gigas* would be entirely invisible. Neither Say nor LeConte alludes to any deflection of the apical thoracic angles, which is so conspicuous a feature in *gigas*, and the figure referred to gives no indication of it. The size of *heros*, as given by Say, is materially less than that of *gigas*. In *Eumolops ampla* the sculpture of the elytra is exactly that which might be inferred from Say's description of *heros*, but this species is evidently different, being much more abbreviated. In describing *heros*, LeConte (Proc. Ac. Phila., 1873, p. 318) states that the scutellar stria is long; in *gigas* the sutural stria in its oblique basal part becomes much coarser and deeper than the rest of the stria, and the author quoted may have mistaken this for a scutellar stria in his Texan representative of *heros*, if congeneric with *gigas*. In *gigas* there is only a feeble diffuse impression surrounding the ocellate puncture, in no way resembling a stria.

Eumolops n. gen.

The species of this genus are rather numerous and were included under *Evarthrus* by LeConte; the entire habitus, not only due to the deeply constricted prothorax but in other features, is however quite different from that of *Evarthrus*, as may be seen readily when series of the two genera are juxtaposed. The maxillary palpi in *Evarthrus*, although not notably stouter than in *Eumolops*, have the last joint not fusiform and with the apex more truncate. The prothorax is varied in form somewhat as in *Hypherpes*, in having the base equal to or wider than the apex to very much narrower, like that of the much smaller *Anaferonia*, and the foveæ are always

bistriate as in the latter. The incised line behind the apical margin is generally well developed, but in the species with narrow thoracic base it becomes wholly obsolete medially, this diversification also being somewhat as in *Anaferonia*. The prosternum is impressed along the middle, the sulcus becoming very feeble in some species; this is not an important character from a generic viewpoint. In the male the entire upper surface is frequently highly polished, but in the female the elytra are apt to be more opaque; in *gravida* the lustre is similar in the two sexes. The scutellar stria varies from long and distinct to virtually obsolete.

The species known to me are as follows, the description of *heros* Say, being taken from the original:

Body stouter, less convex; thoracic base as wide as the apex or wider, the apical incised line always distinct and entire; scutellar stria usually evident, sometimes long, rarely wanting; prosternum sulcate. 2

Body less stout and more convex, the thoracic base much narrower than the apex, the apical incised line completely wanting, except toward the sides; scutellar stria wanting or vestigial; prosternum less impressed 7

2—Body notably large in size, black and glabrous; mandibles much and deeply striated; thorax large, convex, rather abruptly contracted at the basal margin; dorsal and anterior and basal lines distinct; basal margin depressed near the angles, rugose; an elevated line on the basal margin, near to and parallel with the lateral edge; basal angles rectangular; elytra very slightly striated; striæ acute, punctured, the punctures obsolete toward the tip; interstitial lines flat; beneath black. Length rather more than nine-tenths of an inch [say 23 mm.]. The Arkansas. [*Feronia heros* Say]. . . . . **heros** Say

Body evidently not so large in size 3

3—Scutellar stria fine, short, punctate, entirely discal, not approaching the first stria, which continues unbroken to the base. Body oblong-oval, stout, feebly convex, deep black and shining, the elytra alutaceous in the female; legs black; head slightly more than half as wide as the prothorax, the eyes moderately prominent; sulci coarse, long and deep, extending also through about basal half of the epistoma; antennæ black, with the vestiture pale gray, extending almost to the thoracic base; mandibles striate throughout; prothorax fully one-half wider than long; base slightly wider than the apex, which is sinuate, broadly margined, the margination flat, delimited by an incised line, the angles not deflexed as in *Megasteropus* but as in all the following species; sides broadly rounded, coarsely reflexed, the edge thick, gradually converging toward the very moderate stricture and thence straight and just visibly diverging to the right angles; surface with feeble ruguliform lines; anterior impression obsolete, the posterior distinct, subangulate, the stria coarse, almost attain-

ing the base; inner fovea coarse, deep and linear, the outer slightly shorter, coarsely incurved along the margin at base, the carina long, coarse, obtuse; elytra oblong-oval, two-fifths longer than wide, a fourth wider than the prothorax, the striæ very fine, not at all impressed, finely but distinctly punctate, the punctures gradually very fine and lineiform posteriorly; marginal stria very fine, midway between the eighth and margin. Length (♀) 19.5 mm.; width 8.3 mm. Texas..... **ampla** n. sp.

Scutellar stria long, forming the basal part of the first stria, the true basal part of the latter detached.....4

Scutellar stria wholly wanting.....6

4—Thoracic sides behind the constriction very strongly diverging to the angles, which are acute or much less than right. Body not so stout as usual in this section and more convex, shining, deep black, the legs black; elytra opaculate in the female; head two-thirds as wide as the prothorax, the eyes rather feebly convex; sulci short, coarse, only very feeble on the epistoma; antennæ fuscous, black basally, the pubescence gray; prothorax two-fifths wider than long; base and apex equal and subsimilarly, very distinctly sinuate, the subapical incised line deep, entire; sides coarsely reflexed, evenly, rather strongly arcuate, the stricture deep though rounded; surface everywhere with coarse deep and conspicuous ruguliform lines, especially deep about the foveæ; anterior impression feeble, the posterior deep, subangulate; inner fovea narrow, abruptly deep, the outer about half as long, not incurved at base; between it and the marginal gutter the carina is narrow and strong; elytra oval, convex, three-fifths longer than wide, fully a third wider than the prothorax, the sides rather broadly reflexed, the marginal stria midway; striæ coarse and deep, coarsely, deeply punctate, both striæ and punctures feeble apically; intervals not quite flat. Length (♀) 17.0 mm.; width 6.3 mm. Florida..... **prominens** n. sp.

Thoracic sides behind the constriction feebly diverging (♂), or parallel (♀), the angles right, sometimes rather blunt; body broader and less convex.....5

5—Body (♂) elongate-oval, moderately convex, highly polished throughout and deep black, the legs also black; head large, not quite three-fourths as wide as the prothorax; eyes moderately prominent; sulci coarse and deep, rather deep also on the basal part of the epistoma; antennæ long, extending well behind the thoracic base, black, rufescent distally; prothorax two-fifths wider than long; base feebly sinuato-truncate, as wide as the rather deeply sinuate apex, the margination of the latter wide, delimited by a fine and entire, rather feeble incised line; sides rather coarsely reflexed, evenly, somewhat strongly arcuate to the stricture, which is shallow, gradual and rounded, thence straight and not very long to the angles; surface with feeble ruguliform lines, very deep and coarse at the foveæ; anterior impression very feeble, the posterior distinct; inner fovea long and deep, the outer two-thirds as long, not incurved at base, the carina strong; elytra oval, three-fifths longer than wide, a fourth wider than the

prothorax; striæ not coarse but deeply impressed, rather strongly loosely punctate anteriorly; intervals conspicuously convex. Female differing considerably, being stouter, with the elytra broader, opaque and with the intervals nearly flat; ruguliform lines of the pronotum deeper. Length (♂♀) 17.0–18.5 mm.; width 6.5–7.3 mm. New Mexico (Las Vegas)..... **sexualis** n. sp.

Body broader, moderately convex, deep black throughout, shining, the elytra dull in the female; head three-fifths as wide as the prothorax, parallel basally, the neck scarcely at all constricted behind the eyes, which are but feebly convex; sulci coarse, parallel, slightly arcuate; antennæ well developed, black, ferruginous distally, the gray pubescence conspicuous; prothorax shorter and more transverse than in the preceding, one-half wider than long; base scarcely as wide as the apex, sinuato-truncate; apex distinctly sinuate, the margination delimited by a strong incised line; sides strongly, evenly arcuate and coarsely reflexed to the stricture, which is less broadly rounded than in the preceding and a little further from the basal angles; surface with impressions and rugulosity nearly as in the preceding, the double foveæ also almost similar, except that the inner is more regularly and sinuously continuous with the outer along the basal margin; elytra barely one-half longer than wide, a fifth wider than the prothorax; striæ fine, feebly impressed, the punctures small but distinct, widely and irregularly separated, obsolete apically, the intervals about flat; marginal stria midway, it and the eighth distinctly punctate; ocellate series as usual, uninterrupted. Length (♀) 17.8 mm.; width 7.35 mm. Colorado (Akron),—Shantz..**inflatula** n. sp.

6—Form very stout, oblong-suboval, moderately convex and shining, the elytra subequally so in the two sexes; body and legs deep black; head four-sevenths as wide as the prothorax, slightly elongate; eyes rather large and somewhat prominent, the sulci coarse and deep; antennæ well developed, slightly thickened basally, black, ferruginous apically; prothorax one-half wider than long; base broadly sinuate, except laterally, and wider than the deeply sinuate apex, the margination of the latter defined by an evenly and deeply incised line; sides coarsely reflexed, rounded, gradually and broadly sinuate basally, the angles right; anterior impression obsolete, the posterior deep and distinct; ruguliform lines feeble, more evident basally; inner fovea long, deeply impressed, acute at bottom, not attaining the base, the outer three-fourths as long, less sharply impressed, attaining and sometimes curving inward along the base, the carina high but obtuse; elytra a third to two-fifths longer than wide, only a fifth wider than the prothorax, obtusely ogival in about apical third, the sinus broad and barely traceable; striæ rather fine but well impressed, the punctures comparatively coarse, crenulating the broadly convex intervals, obsolete apically. Length (♂♀) 19.5–20.8 mm.; width 8.3–8.7 mm. Texas. Three examples.

gravida Hald.

7—Sides of the prothorax behind the constriction long, usually diverging basally, the constriction deep and abrupt, the basal angles right...8

Sides behind the much feebler constriction notably short, the basal angles obtuse, though not rounded as a rule.....10

8—Sides of the prothorax more oblique and very moderately rounded from apex to the constriction. Form not very stout, convex, deep black, the under surface and legs somewhat piceous-black; upper surface highly polished, the elytra in the female but slightly alutaceous; head large, nearly three-fourths as wide as the prothorax; eyes rather large and prominent, the sulci parallel, deeply impressed; antennæ extending slightly behind the thoracic base, piceous-black, gradually ferruginous distally; prothorax scarcely a third wider than long, the sides finely reflexed but with thick bead; base transverse, distinctly narrower than the apex, three-fourths the maximum width, which is near apical third; anterior and posterior impressions obsolete, the latter represented by a depression near the inner fovea, as in some other species of this genus as well as in *Evarthrus;* inner and outer foveæ forming a single deep elongate concavity, the sharp line of the inner curving outward at base to the outer; carina distinct, confluent with the margin basally; elytra oval, nearly three-fifths longer than wide, a fourth (♂) to nearly a third (♀) wider than the prothorax, the sides arcuate, the sinus feeble, more evident in the female; marginal stria fine, impunctate, submedial; striæ moderately strong, sharply incised, finely but distinctly punctate, the scutellar wanting; intervals almost perfectly flat, not alternating in width. Length (♂♀) 15.5–17.0 mm.; width 6.0–6.2 mm. Pennsylvania (Rockville),—A. B. Champlain.....**furtiva** Lec.

Sides of the prothorax less oblique, subevenly, strongly and almost circularly rounded from apex to the constriction; marginal stria of the elytra submedial but coarser and punctate.....9

9—Body but very slightly ventricose, only moderately convex, polished in the male, deep black, the legs piceous-black; abdomen and epipleura obscure rufous; head rather large though only about three-fifths as wide as the prothorax; eyes moderate, rather prominent, the sulci coarsely and deeply impressed; antennæ nearly as in the preceding; prothorax larger, not quite a third wider than long, the sides evenly and rather deeply reflexed; base feebly sinuate except laterally, scarcely two-thirds the maximum width; apex distinctly sinuate; transverse impressions broad and very feeble, the posterior deep only in a depression near each inner fovea, the foveæ coalescent somewhat as in *furtiva;* carina united completely with the side margins, the angles slightly reflexed; scutellum prominently rugulate in basal, smooth in apical, half; elytra elongate-oval, nearly two-thirds longer than wide, only a fifth wider than the prothorax; sides evenly arcuate, broadly reflexed, the sinus broad and very feeble though observable; striæ rather coarse, deeply impressed, strongly and rather closely punctate, the scutellar short, forming a fine bipunctured line behind the ocellate punctures; intervals strongly convex, subequal, the seventh toward base becoming prominent, the ridge ending at the omoplate; humeri rounded and not denticulate. Length (♂) 17.8 mm.; width 6.6 mm. Florida.....**sulcata** n. sp.

Body much more ventricose but not very stout, convex, deep black, shin-

ing (♂) or with the elytra opaque (♀); legs black; head more than two-thirds as wide as the prothorax, not elongate, the neck well developed; eyes rather prominent, the sulci not very coarse, slightly converging; antennæ as in *sulcata* and others of this group; prothorax relatively much smaller, somewhat more than a fourth wider than long; base feebly sinuate medially, not three-fifths the maximum width; apex evidently sinuate; sides not coarsely reflexed but with somewhat thickened edge, the parallel basal part a fifth or sixth the total length; transverse impressions very diffuse though evident, the posterior not forming a juxta-foveal depression; inner and outer foveæ coalescent, deep, elongate, the carina rather long but fine and adjoining the margin; scutellum smaller, triangular, smooth throughout; elytra oval, two-thirds longer than wide, two-fifths wider than the prothorax; sides moderately reflexed, the sinus scarcely traceable; striæ moderate, rather sharply and deeply incised, the punctures somewhat conspicuous, gradually obsolete behind, the scutellar stria a minute oval impression; intervals generally somewhat alternating in width, the second and fourth wider than the others, broadly but distinctly convex (♂), nearly flat (♀). Length (♂♀) 17.5–18.5 mm.; width 6.0–7.0 mm. Iowa (Keokuk). Pennsylvania—LeConte..... **sodalis** Lec.

10—General outline and convexity nearly as in *sodalis*, rather shining, black, the elytra opaculate in the female; head three-fifths as wide as the prothorax, the eyes only moderately prominent, the sulci slightly converging; antennæ as in the preceding; prothorax also somewhat similar in outline and strongly, subcircularly rounded at the sides, but with the constriction less abrupt, shallow and broadly rounded, the sides thence to the base very short; disk somewhat shorter and more transverse than in *sodalis*, otherwise nearly similar; elytra two-thirds longer than wide, fully three-sevenths wider than the prothorax, oval, the striæ rather fine but deep, scarcely at all impressed, the punctures not coarse but deep and conspicuous, obsolete apically; scutellar stria obsolete; intervals subequal, nearly flat in the female. Length (♀) 15.8–18.0 mm.; width 5.7–6.6 mm. Indiana. Four specimens..... **fatua** Lec.

Evarthrus sallei, *colossus* and *torva* of LeConte also probably belong to this genus, but the first is wholly unrecognizable, the two lines in the table (Proc. Acad., 1873, p. 319) conveying no useful information; not even a measurement of length or recorded locality is indicated, and, as the above is virtually the only reference to it, I am obliged to consider it unpublished and therefore as merely a manuscript name. *Colossus*, with its vestigial and punctiform scutellar stria, I have not seen, apparently it belongs near *gravida; torva* is also unknown to me. Two of my three specimens of *gravida* have the scutellar region perfectly normal, the ocellate puncture being merely within a feeble non-striiform impression, but in

the third specimen there is a singular abnormality; the ocellate puncture and feeble impression are as in the others, but between the ocellate puncture and the first stria there is an oblique incised line, subparallel to the oblique basal part of the first stria; this oblique line is not connected in any way with the ocellate puncture and is presumably wholly adventitious.

The species described under the name *corax* by LeConte, from near the Rocky Mountains, I have not seen, but the indications are that it is a distinct species and not a synonym of *sodalis; fatua*, also placed as a synonym of the latter in the lists, is a perfectly valid species, differing greatly in the basal part of the prothorax and more slender outline. LeConte makes no mention of alternating widths of the strial intervals in *sodalis;* possibly this may have been overlooked, or else the Mississippi Valley form may be specifically different from the Pennsylvania type. I have no means of deciding this at present.

Subgenus **Evarthrinus** nov.

The two following species so closely resemble *fatua*, that they are probably commingled in collections. The body is generally more or less opaque in both sexes. As a group they differ from the preceding part of the genus in having three dorsal punctures on the elytra, instead of the one so invariable in *Evarthrus* and allied genera.

Body moderately stout and but feebly ventricose, dull in lustre, with the anterior parts less so, deep black throughout; head notably large, more than two-thirds as wide as the prothorax, with rather prominent eyes and deep subparallel sulci; antennæ black, ferruginous only at apex; prothorax a third to two-fifths wider than long, the sides only moderately coarsely reflexed, strongly, subevenly rounded to the constriction, thence parallel in basal seventh or eighth to the right but bluntly rounded angles; surface with some ruguliform lines, the anterior incised line deep, entire; foveæ forming an oblong concavity, the carina long, close to the edge; base three-fourths the maximum width and evidently narrower than the sinuate apex; elytra two-thirds or more longer than wide, two-fifths wider than the prothorax, the sides gradually rounding from slightly behind the middle; striæ distinct, moderately impressed and deeply and conspicuously though not very coarsely punctate, the scutellar varying from evident to obsolete; intervals not quite flat; three dorsal punctures distinct. Length (♂♀) 16.0–18.0 mm.; width 5.8–6.3 mm. Indiana. Three specimens..... **decepta** n. sp.

Body somewhat similar in color and lustre but smaller, not quite so stout and with less developed head, the latter scarcely three-fifths as wide

as the prothorax, the eyes only moderate; sulci parallel; antennæ black, gradually ferruginous from about the middle; prothorax two-fifths wider than long, throughout nearly as in *decepta*, except that the straight parallel part of the sides behind the constriction is shorter, a ninth or tenth the total length; elytra three-fourths or more longer than wide, relatively less inflated, only about a fourth wider than the prothorax, similar in outline, striation and punctures, the latter likewise gradually obsolete posteriorly; three dorsal punctures deep and distinct; scutellar stria obsolete or vestigial; marginal stria submedial in the outer interval. Length (♂ ♀) 14.5–15.0 mm.; width 5.2–5.4 mm. Texas.....**impolita** n. sp.

The scutellum is longitudinally plicatulate as a rule in both these species, and, as usual among the Evarthrids, is very transverse and triangular.

Evarthrus Lec.

This genus is composed of a moderate number of species possessing a closely similar habitus, due to the generally opaque integuments in both sexes; sometimes this opacity extends to the entire body as in *enormis* and *nonnitens*, but usually the anterior parts are less dull than the elytra and in *americanus* become decidedly lustrous; in the male of *blatchleyi* the entire body is notably shining though not polished. The sides of the prothorax are oblique to the base, rarely becoming slightly sinuate before the basal angles, and the base is about as wide as the apex, sometimes wider. The last palpal joint is but little shorter than the third, though parallel, with the apex truncate. The antennæ are filiform and notably long, often half as long as the body in the male. The inner and outer thoracic foveæ are widely separated as a rule, the lateral margin more or less broadly reflexed basally and finely so apically, and not uniformly reflexed throughout the length as in the two preceding genera. The head is usually moderate in size, but sometimes becomes much larger as in *enormis*. The species at present known to me may be described as follows:

Sides of the prothorax subevenly oblique to the basal angles from behind the middle.....2

Sides becoming briefly and feebly sinuate just before the basal angles. 7

2—Legs bright red. Body elongate subparallel, only feebly convex, deep black, but little less black beneath; upper surface shining, the elytra opaque in both sexes; head slightly elongate, four-sevenths as wide as the prothorax, the eyes very moderate and but slightly prominent; sulci slightly sinuous; mandibles smooth externally; antennæ ob-

scure rufous throughout; prothorax scarcely more than a fourth wider than long; base broadly sinuate except laterally, equal in width to the still more sinuate apex, the nearly flat border of the latter defined by an entire and deeply incised line; sides very evenly arcuate from apex to base, broadly reflexed basally, the basal angles obtuse and blunt; stria not entire, very deep at its posterior end; impressions just traceable, the posterior having a deep rounded depression near each inner fovea; surface with sparse transverse ruguliform lines; foveæ confluent; carina distinct, distant from the reflexed sides; scutellum small, transversely triangular, smooth; elytra three-fourths longer than wide, barely a fourth wider than the prothorax; sides broadly arcuate, the sinus very feeble; striæ finely, deeply incised, with deep and conspicuous punctures, slightly crenulating the just visibly convex intervals; scutellar stria wanting, the marginal nearer the eighth than the margin. Length (♂♀) 14.0–16.5 mm.; width 4.8–5.7 mm. Missouri (St. Louis) and Iowa (Keokuk).

rubripes n. sp.

Legs black to piceous.....3

3—Sides basally only narrowly reflexed and broadly, just visibly sinuate to straight, though not at all constricted.....4

Sides of the prothorax rather broadly reflexed and arcuate, not straight or feebly sinuate basally, the conformation as in *rubripes*.....5

4—Body slightly ventricose, moderately convex, deep black, the elytra opaque, the anterior parts slightly shining; head more polished, nearly three-fifths as wide as the prothorax, the eyes rather prominent; mandibles striate only internally behind the middle; antennæ slender, ferruginous distally; prothorax not quite a third wider than long; base and apex equal, the apex broadly, the base medially, sinuate; anterior margination defined by an entire and deeply incised line; sides a little straighter basally; transverse impressions feeble, small, the depression just inside the inner foveæ deep; foveæ widely separated; carina rather obtuse; elytra one-half to two-thirds longer than wide and a fifth to two-fifths wider than the prothorax, the subapical sinus barely traceable; strial punctures and intervals nearly as in the preceding, the marginal stria very close to the eighth and the scutellar obsolete. Length (3♂, 6♀) 14.5–17.5 mm.; width 5.2–6.6 mm. Indiana. Levette collection; also received from Mr. Blatchley under the name *orbatus*.....**sigillatus** Say

A—Similar to *sigillatus* but flatter and much more parallel, the prothorax relatively larger and subequal in width to the elytra, with the incised line parallel to the apical margin very much finer and feebler; surface more broadly impressed at the foveæ, which are therefore individually less deep, the depression near the inner feeble and diffuse; oblique sides basally feebly arcuate, not becoming so straight as in *sigillatus;* other characters nearly similar. Length (♂) 15.7 mm.; width 5.35 mm. Indiana.

parallelus n. subsp.

Body still less ventricose and more parallel, moderately stout, the anterior parts relatively a little larger than in *sigillatus*, the surface less opaque, distinctly shining in the male; color deep black through-

out; head unusually large, though only about three-fifths as wide as the prothorax; eyes very prominent; sulci deep, parallel and slightly contorted; antennæ long and fusco-testaceous, nearly black basally; prothorax large, a third wider than long; base somewhat wider than the apex, the incised line behind the latter coarse, deep and entire; sides broadly, subevenly rounded throughout, becoming just visibly sinuate posteriorly, the basal angles obtuse but rather well defined; surface very smooth, nowhere punctate; posterior transverse impression distinct and lineate, entire, gradually deeper toward the foveæ, the latter very deep, transversely united by a very coarse deep impression extending from the inner to the outer; carina strong, at some distance from the margin; scutellum longitudinally plicate at base; elytra two-thirds longer than wide, only about a fifth wider than the prothorax, not differing much in the sexes; striæ slightly impressed, not very fine and very distinctly punctate, the punctures rapidly obsolescent behind the middle, the scutellar wanting; intervals not quite flat in either sex. Length (♂ ♀) 17.0–17.5 mm.; width 6.0–6.35 mm. Florida (Dunedin),—W. S. Blatchley. Three examples, sent under the name *americanus* Dej. . . . . **blatchleyi** n. sp.

5—Sides of the prothorax broadly, very obtusely subangulate medially; base distinctly wider than the apex. Body much more abbreviated than in the preceding and more convex, almost similar in coloration and lustre; head fully three-fifths as wide as the prothorax, shorter than wide, the eyes rather prominent; sulci coarse, feebly converging; antennæ blackish basally, very gradually ferruginous distally; prothorax not quite a third wider than long; base sinuate in about median third; apex sinuate, the incised line delimiting the border deep; sides finely reflexed in apical, rather broadly in basal, half; basal angles obtuse, rounded; impressions obsolete, the depression near each inner fovea distinct; foveæ rather short, deep, well separated, the intervening surface transversely concave; carina strong, not far distant from the sides; elytra short, scarcely one-half longer than wide, fully two-fifths wider than the prothorax; sides arcuate, the sinus very distinct although not deep; striæ and punctures nearly as in *sigillatus;* punctures traceable nearly to the apex, the scutellar stria wanting, the marginal extremely close to the eighth; intervals nearly flat. Length (♀) 15.0 mm.; width 5.7 mm. North Carolina (Southern Pines),—Manee. . . . . **breviformis** n. sp.

Sides of the prothorax evenly arcuate. 6

6—Body rather slender and subparallel (♂), stouter and more ventricose (♀), in color and lustre nearly as in *sigillatus*, somewhat smaller in size; head moderate, four-sevenths as wide as the prothorax, the eyes moderate in size and prominence; sulci and antennæ as usual; prothorax a fourth wider than long, somewhat more (♀); base subequal to the apex and broadly sinuate except laterally; apex rather deeply sinuate, the incised line deep and entire; impressions obsolete, the depression near each inner fovea deep and distinct; foveæ not very widely separated, rather short, very deep, shallowly confluent, the carina short, distant from the sides; basal angles obtuse, the tips blunt though anguliform; elytra three-fifths or more longer than

wide, barely visibly (♂) or a fourth (♀) wider than the prothorax, the striæ not coarse but rather strongly punctate and unusually impressed, the scutellar wanting as usual in this genus; intervals feebly convex. Length (♂) 13.5–15.0, (♀) 14.5–15.5 mm.; width (♂) 4.5–5.0, (♀) 5.3–5.9 mm. Indiana, Iowa, Missouri, Kansas and Arizona.....**seximpressus** Lec.

Body larger and much stouter, especially in the female, and with relatively much larger prothorax in both sexes; coloration and lustre nearly as in the other species, the elytra opaque in both male and female as usual, the anterior parts rather strongly shining; head better developed, three-fifths to two-thirds as wide as the prothorax, the eyes moderate in size but rather prominent; sulci sinuous, slightly converging; antennæ as usual; prothorax a fourth wider than long; base broadly sinuate except laterally and just visibly wider than the apex, the incised anterior line deep and entire; stria extending from the incised line to the base and rather fine, coarser subbasally; impressions obsolete, the depression near the inner foveæ diffuse and transversely sublineate; foveæ linear, moderate in length, widely separated, joined transversely submedially by a feeble depression, which is acutely lineate at the bottom; carina distinct, rather distant from the sides; elytra more oblong-oval than usual, one-half to three-fifths longer than wide, a fifth to sixth wider than the prothorax, the moderate striæ rather sharply incised, the punctures deep and rather small but nearly as in the other species, the scutellar stria wanting; intervals very feebly convex (♂), flat (♀). Length (♂♀) 16.0–17.5 mm.; width 5.8–6.8 mm. North Carolina (Southern Pines),—Manee. Four examples.....**americanus** Dej.

7—Form stout and with dull lustre throughout in the female, the elytra opaque; body and legs deep black; head larger, two-thirds as wide as the prothorax, the eyes rather large and prominent; sulci acutely very deep, parallel but contorted; antennæ fusco-testaceous, the four basal joints black, the first three glabrous as usual; mandibles striate only internally; prothorax two-fifths wider than long; base broadly sinuate except at the sides, equal in width to the more feebly sinuate apex, the margination broad, the incised line deep, entire and more arcuate than usual; sides finely reflexed anteriad, broadly posteriad, evenly arcuate to the small and feeble oblique basal sinuation, the angles more than right; ruguliform lines of the surface few and faint, wanting basally; transverse impressions obsolete, the posterior visible near each inner fovea in a small depression as in *seximpressus;* inner fovea very deep and briefly sublinear, the outer short, rectangularly inflexed at base, the carina moderate, rather distant from the margin; scutellum very broad, finely rugose; elytra oblong-suboval, one-half longer than wide, a third wider than the prothorax; sides feebly arcuate, the sinus broad but distinct; humeral ridge pronounced; striæ rather fine, distinctly impressed throughout, the punctures well spaced, very deep and distinct though not coarse; intervals very slightly convex, the marginal stria very close to the eighth; prosternum deeply sulcate. Length (♀) 20.5 mm.; width 7.3 mm. Texas (Houston).....**enormis** n. sp.

Form less convex, extremely dull or opaque, black; elytra (♀) entirely without lustre, flat; prothorax wider than long, rounded and rather strongly margined on the sides, which are very shortly sinuate behind; hind angles rectangular; base not narrower than the apex, the anterior impression [perhaps the incised subapical line is intended] deep, hind one well marked; foveæ deep, bistriate, with a short external carina; elytra oval, scarcely wider than the prothorax; humeri broadly rounded; tip scarcely sinuate; striæ fine, punctured; marginals not approximate; interspaces broad and flat, third with the usual puncture; prosternum very deeply sulcate. Length 18 mm. Louisiana (Red River).....**nonnitens** Lec.

The species named *enormis* above I had labeled *nonnitens* in my collection for many years, but a recent inspection of the original description of *nonnitens*, of which a virtual transcription is given in the table, shows that this identity is improbable. The elytra are notably wider than the prothorax in *enormis* and by no means flat, the marginal stria close to the eighth and the subapical sinus is distinct. The posterior transverse thoracic impression is obsolete, except in a depression at each side near the inner fovea, as pronounced a feature here as it is in *seximpressus*, where it served to suggest the name given by the describer; it is distinct also in almost all the other species. As the unique original type of *nonnitens* was also a female, these comparisons seem to indicate that *enormis* is a different though allied species.

I am unable to identify the species described by Chaudoir (Rev. Mag. Zool., 1868, p. 52) under the name *Evarthrus acuminatus*, and no reference to it appears in the work of LeConte. It is compared with *seximpressus*, but the basal parts of the prothorax accord better with the genus *Megasteropus* where, however, the acuminate elytra described in *acuminatus*, are not apparent. Only an inspection of the type can decide where it belongs.

It is possible that the incised line along the apical thoracic margin, well developed in all the species, though finer in *parallelus*, may have been alluded to sometimes as the anterior thoracic impression. The true anterior transverse impression is always feeble and more diffuse, lying well behind this incised line when it is present at all; it is usually completely obsolete in *Evarthrus*, though frequently distinct in *Anaferonia*.

Monoferonia n. gen.

The male of *Evarthrus mancus* Lec., from Habersham Co., Georgia, has, according to the original description, a small transverse tubercle near the apex of the last ventral segment. In describing *Evarthrus diligendus*, Chaudoir states that the last ventral of the male has a transverse ovulate excavation near the posterior margin, nothing being said of any tubercle or ridge. In *Pterostichus osculans* Csy., the last ventral of the male has a large deep transverse excavation at tip, occupying nearly half the entire length and bounded anteriorly by an even transverse ridge, more than half as long as the entire width of the segment in line with it. We have, therefore, three obviously different characterizations for the male abdominal modification in this genus. Unless Chaudoir overlooked the transverse ridge or tubercle, he was therefore probably mistaken in considering his *diligendus* the same as *mancus*. LeConte's description makes no mention of any excavation, the anteriorly bounding transverse ridge of which in *osculans* could not be called a tubercle in any sense. It now seems to me, in view of these facts, that it would probably be well to maintain all three of these species as distinct until actual comparisons can be made, the *appalachius* of Horn being, in any event, a synonym of *osculans* (Mem. Col., IV, 1913, p. 132). In *mancus* LeConte states that, besides the longitudinal fovea, the pronotum has at the posterior angles an oblong puncture. In *osculans* there is, besides the elongate and wholly discal impressed fovea, a small arcuate impressed line, inwardly flexed basally, and a third as far from the sides as from the fovea, not closely approaching the angle and not resembling in any way an oblong puncture. The arcuate line of *osculans*, just mentioned, is widely and wholly detached from the elongate fovea, so that the following language used by Chaudoir, in regard to *diligendus*, could not apply: "de chaque côté de la base un sillon profond, qui s'arrête au tiers de la longueur et qui remonte en crochet le long de la base et du bord latéral, où il est oblitéré." It can be seen from this, however, that *osculans* is probably more closely allied to *diligendus* than to *mancus;* it is probably from somewhere in the Altantic regions of the continent and not more western, as originally surmised by the writer.

Ferestria Leng

The very small species separated under this name by Mr. Leng (Bull. Am. Mus., XXXIV, p. 576) were placed at first in *Broscus* and later in *Evarthrus* by LeConte. They present a singularly distinct appearance, due to their small size, *Anaferonia*-like habitus and largely effaced elytral striæ. The single thoracic foveæ are shorter and relatively more deeply excavated than in any other genus, and the posterior thoracic angles are very obtuse and rounded, though in some species there is a minute acute prominence at the position of the posterior marginal puncture. In *obsoleta* Say, the position of this puncture is discordant, it being at a considerable distance in front of the hind angles. In *morio* Dej., the almost universal lateral reflexed margin of the prothorax is completely obsolete behind about the middle and, anteriorly, is very fine and barely observable. The following species is hitherto undescribed:

Ferestria nanula n. sp.—Moderately ventricose, convex, polished, deep black, the legs rufo-piceous; head more than two-thirds as wide as the prothorax; eyes moderately prominent, the sulci very widely separated, slightly converging; antennæ rather short and thick, piceous; prothorax nearly one-half wider than long, the sides finely but strongly, equally margined throughout, parallel and feebly arcuate, very rapidly and arcuately oblique posteriorly, the obtuse angles with a minute acute external projection; base sinuate except laterally, slightly wider than the peduncle of the hind body and but little more than half the maximum width; apex only just visibly sinuate, the anterior incised discal line distinct and entire; stria fine, even, not quite attaining the base; surface very smooth, the transverse impressions scarcely traceable, the foveæ small, slightly oblique and very deep; posterior marginal puncture coarse, at the basal angles; elytra oval, not quite one-half longer than wide, a fourth wider than the prothorax; marginal stria forming the outer limit of the row of relatively very coarse ocellate punctures; striæ wholly obsolete, excepting vestiges of the first four or five, which are feebly and indefinitely punctulate; dorsal puncture barely at all behind the middle; abdominal sutures very coarse, ending at each side in a coarse sublateral fovea; anterior tarsi scarcely more dilated in the male. Length (♂ ♀) 8.5–10.0 mm.; width 3.3–3.6 mm. Alabama (Mobile),—Löding.

The very slight differences in the anterior tarsi among the four examples at hand, renders it somewhat doubtful if both sexes be really included. The abdominal surface is very smooth throughout in this genus, but the sutures are unusually coarse.

Feronina n. gen.

The species described by Schaeffer under the name *Pterostichus palmi*, of which I have an apparently typical specimen, sent by Mr. Beutenmüller and taken in the Black Mts. of North Carolina, presents no very marked peculiarities of habitus and would not be considered as the type of a separate generic group, were it not for the sake of consistency in basing genera to great degree upon the number of discal punctures of the elytra. The type was compared with *lubricus* Lec., by the author, but there is apparently no close affinity between the two. Though less convex, *palmi* greatly resembles the genus *Monoferonia* in the general outline of the body and in the single elongate pronotal foveæ, but differs not only in having two discal punctures on the elytra, but in the long and distinct scutellar stria and in having the lateral series of ocellate foveæ widely interrupted at the middle. My single specimen is a female, so that it is impossible to describe the ventral apex in the male for comparison with *Monoferonia* or with *Pterostichus lubricus*, forming the type of *Paraferonia* further on. Mr. Schaeffer states that in the male of *palmi* the last ventral segment is not carinate at the middle, and presumably there is also no impression.

Euferonia n. gen.

The rather numerous species of this genus form the most abundant and conspicuous Pterostichid element of the Atlantic regions of North America; they are usually rather large in size, of a very polished deep black coloration in both sexes, convex upper surface and deep elytral striation, the scutellar stria very long, sulciform and conspicuous throughout. The thoracic apex is constantly without trace of the transverse incised line of the Evarthrids. The species are rather closely allied among themselves, so that LeConte in later years and with constantly increasing supply of material, was disposed to give them up in despair, uniting several of his earlier species in synonymy with *coracinus*. The species form two distinct subgeneric groups as follows:

Prothorax relatively large, the sides rounding to the obtuse basal angles, the foveæ double or bistriate, frequently confluent.....Group I 2
Prothorax relatively smaller, the sides feebly sinuate before the distinct basal angles, the foveæ long and single.....Group II 11

2—Carina near the hind thoracic angles obsolete. Body not very stout, convex; head two-thirds as wide as the prothorax, with prominent

eyes, the sulci moderately separated, arcuate and slightly converging; antennæ rather long, obscure ferruginous; prothorax a fifth wider than long, widest at anterior two-fifths; base feebly sinuate medially, arcuate laterally, narrower than the apex and three-fourths the maximum width; sides broadly reflexed, arcuate, oblique and straighter basally, the basal angles broadly rounded; foveæ united, forming a feebly punctured concavity; scutellum narrowly triangular, as long as wide; elytra two-thirds longer than wide, two-fifths wider than the prothorax; striæ deep, with the bottom extremely finely punctulate, the marginal nearer to the sides than to the eighth stria; intervals very convex. Length (♂) 15.0 mm.; width 5.4 mm. Indiana. [*Pt. protensus* Lec.] ..... **relicta** Newm.

Carina very distinct 3

3—Pronotal foveæ separated 4

Pronotal foveæ coalescent, forming a large deep concavity, with the bottom punctate and usually almost even 8

4—Prothorax more trapezoidal, the base distinctly narrower than the apex, with the longer foveæ separated by a wide and nearly flat depressed surface; antennæ longer, almost half as long as the body. Rather stout but only moderately convex; head three-fifths as wide as the prothorax, with prominent eyes and very broadly impressed sulci; prothorax a sixth wider than long, widest well before the middle, the base nearly truncate; sides broadly reflexed, straight basally, the angles broadly obtuse and rather rounded; carina moderately strong, long, outwardly arcuate; elytra two-thirds longer than wide, two-fifths wider than the prothorax, gradually broadening and with feebly arcuate sides to behind the middle; striæ very deep, the punctulation at the bottom extremely fine; intervals very convex. Length (♀) 18.0 mm.; width 6.4 mm. North Carolina (Asheville) ..... **proba** Csy.

Prothorax less trapezoidal, about as wide at base as at apex, the sides more evenly arcuate; foveæ separated by a pronounced elevation, which becomes obsolete posteriorly; antennæ not quite so long 5

5—Prothorax subquadrate, but little narrower at base than anteriorly. Body rather narrow, elongate, convex, deep black and polished; head three-fifths as wide as the prothorax, with prominent eyes; sulci coarse, parallel; antennæ rather long and slender, ferruginous, blackish basally; prothorax scarcely visibly wider than long; base nearly five-sixths the maximum width, feebly sinuate medially, arcuate laterally; apex very feebly sinuate; sides coarsely reflexed, feebly arcuate, slightly less so basally, the angles very broadly obtuse; transverse impressions diffuse and feeble, the stria subentire; foveæ linear, the intervening depression shallow, with a longitudinal convexity ending before the base; carina short, distant from the margin; elytra three-fourths longer than wide, nearly a third wider than the prothorax; striæ very deep, the minute punctules at the bottom scarcely visible and widely separated, the marginal nearer to the edge than to the eighth; intervals very convex; posterior sinus distinct. Length (♂) 14.5 mm.; width 4.8 mm. Ontario.
quadrifera n. sp.

Prothorax much narrower at base than before the middle.....6

6—Body small, abbreviated, the elytra but little longer than the head and prothorax, the striæ not punctulate. Convex, deep black; head two-thirds as wide as the prothorax, with prominent eyes; prothorax slightly wider than long, the transverse impressions distinct; sides not so coarsely reflexed as usual, rounded anteriorly, less so posteriorly, the angles very obtuse; linear foveæ separated by a longitudinal convexity; carina distinct, very close to the edge; elytra evidently less than one-half longer than wide, a fourth wider than the prothorax, rounded at the sides, with subobsolete posterior sinus; striæ rather coarse, deep, the intervals somewhat strongly convex. Length (♂) 12.7 mm.; width 4.7 mm. New York (Adirondack Mts.).....**vapida** Csy.

Body larger, more elongate, the elytra nearly one-half longer than the head and prothorax, the striæ minutely punctulate along the bottom.....7

7—Body less stout, moderately large and convex, polished black; head well developed, three-fifths as wide as the prothorax, with prominent eyes and converging sulci; prothorax a fourth or fifth wider than long; base more than three-fourths the maximum width; apex rather deeply sinuate; sides coarsely reflexed, evenly rounded, a little less so basally, the angles broadly obtuse and blunt; transverse impressions very feeble; foveæ deep and coarse, divided by a longitudinal convexity not attaining the base, the concavity punctate; carina short, not strong and not very far from the margin; elytra two-thirds longer than wide, a fourth wider than the prothorax; sides arcuate and well reflexed, the sinus not very long and rather distinct; striæ very deep, the intervals strongly convex. Length (♂ ♀) 14.0–16.5 mm.; width 5.0–5.7 mm. New York and Pennsylvania to Indiana. Abundant. [*Pt. bisigillatus* Harris and *rugicollis* Hald.].....**stygica** Say

Body larger and broader, black, polished; head a little larger, the eyes and sulci nearly similar; antennæ similar in coloration but distinctly longer, especially the third joint in both sexes; prothorax larger and broader, fully a fourth wider than long, the base fully as wide as the sinuate apex and four-fifths the maximum width; sides broadly and deeply reflexed, especially basally; impressions feeble; deep linear foveæ separated by a broad subtriangular rugose convexity, not attaining the base; elytra broader, only three-fifths longer than wide, a fourth to fifth wider than the prothorax; sides arcuate, the gutter deep, the sinus very broad and feeble; striæ deep, the marginal deeply impressed, nearer to the sides than to the eighth; minute punctulation at the bottom of the striæ sharply defined and rather close-set; intervals strongly convex; metasterna, and the abdomen latero-basally, usually more conspicuously punctate than in *stygica*. Length (♂ ♀) 15.4–17.5 mm.; width 5.8–6.3 mm. Indiana, Illinois, Iowa and Missouri. Six specimens....**ingens** n. sp.

Body smaller than in *stygica* and rather more anteriorly narrowed, deep black, polished; head moderately large, with prominent eyes and converging sulci; antennæ nearly as in *stygica;* prothorax smaller,

the base almost rectilinearly transverse, rounding at the sides, three-fourths the maximum width; sides coarsely reflexed, rounded, rather straighter basally, the angles broadly rounded; surface with the ruguliform lines rather distinct, the transverse impressions unusually pronounced; concavity formed by the united foveæ deep, rather broadly rounded, the bottom subrugose and punctured as usual, but differing from the *stygica* type in having an isolated central convexity, everywhere widely separated from the sides and ends of the concavity; carina strong though obtuse, not very close to the sides; elytra three-fourths longer than wide, somewhat posteriorly inflated, a third to two-fifths wider than the prothorax, the sinus distinct; striæ deep, the punctulation very fine; intervals very convex. Length (♂♀) 14.5–15.0 mm.; width 5.0–5.35 mm. Rhode Island (Boston Neck) ..... **umbonata** n. sp.

Body more parallel than in any of the three preceding, very nearly as in *flebilis* Lec., deep black, shining; head slightly elongate, with moderate but prominent eyes, three-fifths as wide as the prothorax; palpi pale, very slender, the fourth joint much shorter than the third; antennæ extending a little behind the thoracic base, ferruginous, piceous basally, the outer joints on the narrow side very slender basally and very feebly dilated apically; prothorax larger than in any of the three preceding, being barely visibly narrower than the elytra, just visibly wider than long, widest slightly before the middle, the sides subevenly rounded and coarsely reflexed to the very obtuse and blunt, though evident, basal angles; base about equal in width to the deeply sinuate apex and four-fifths the maximum width; foveæ rugose, deep, coalescent posteriorly, the separating surface feebly convex; carina rather short and not very high; elytra three-fourths longer than wide, subevenly rounded behind, parallel, with very feebly arcuate sides; striæ deep, the punctulation along the bottom minute, the scutellar free at tip; intervals strongly convex; tarsi ferruginous. Length (♂) 15.0–15.5 mm.; width 5.2 mm. Indiana. Levette collection ..... **subæqualis** n. sp.

8—Thoracic foveal cavity moderately deep, its rugosely punctate floor nearly flat 9

Thoracic foveal cavity very deep and concave 10

9—Body rather stout, strongly convex, deep black and polished; head well developed, the eyes prominent; sulci broadly and deeply impressed, slightly converging; antennæ rather long; prothorax nearly a fourth wider than long; base sometimes not quite as wide as the apex, which is rather deeply sinuate; sides rounded anteriorly, more oblique but still distinctly arcuate basally, very coarsely reflexed; angles very obtuse and rounded; transverse impressions feeble but evident, the stria deep, entire; foveal depression a fourth the total length and more than a fourth the width; carina long and strong, approaching close to the edge basally; elytra feebly subposteriorly inflated, two-thirds longer than wide, a fourth wider than the prothorax; striæ very deep, vestigially punctulate, the intervals conspicuously convex; subapical sinus very feeble. Length (♂♀) 14.0–17.0 mm.; width 5.0–6.0 mm. Lake Superior to Lake Champlain

and southward to Pennsylvania. Less abundant, larger and stouter than *stygica*. [*Pt. mœrens* Newm.]. . . . . **coracina** Newm.

Body narrower and more elongate, similar in color and lustre, but with the strial intervals less convex and the two dorsal punctures much coarser; head less broad, the eyes evidently not so large, the sulci shorter and parallel; prothorax less dilated anteriorly and very nearly as long as wide, the sides coarsely reflexed, especially behind, and subevenly arcuate throughout; basal angles very obtuse but not more than blunt; impressions, foveæ and carina subsimilar; base fully as wide as the apex; elytra relatively narrower, fully three-fourths longer than wide, nearly a fourth wider than the prothorax, the sinus very long and barely traceable; strial punctulation extremely minute. Length (♂) 15.5 mm.; width 5.3 mm. Pennsylvania. . **flebilis** Lec.

10—Form rather narrower and more elongate than in *coracina* and with relatively smaller prothorax, the coloration and polished lustre similar; head larger, almost three-fourths as wide as the prothorax, the eyes similarly large and prominent and the broadly impressed sulci slightly converging; prothorax but very little wider than long; base as wide as the apex, broadly arcuate laterally, the angles blunt and very obtuse; sides arcuate, less so posteriorly, not quite so coarsely reflexed as in the two preceding, the transverse impressions distinct; carinæ coarse, irregular, subadjacent to the sides posteriorly; elytra nearly as in *coracina* but narrower, nearly three-fourths longer than wide, a third to fourth wider than the prothorax; punctulation of the very deep striæ obsolete; intervals very convex; sinus feeble but distinct. Length (♂) 13.8–16.8 mm.; width 4.8–5.8 mm. Pennsylvania and New York (Adirondacks). . . . . **adjuncta** Lec.

Form still narrower, smaller in size, deep black and polished; head well developed but not so large as in the preceding, the eyes prominent; sulci broadly impressed and parallel; antennæ moderately long; prothorax a fifth wider than long; base scarcely as wide as the apex; anterior impression deep, the posterior rather feeble and more diffuse, widest before the middle as usual, the sides coarsely reflexed and arcuate throughout, less so basally, the angles very broadly rounded; foveal cavity very deep, longer than wide, only feebly rugose, the carina strong, almost adjoining the margin posteriorly; elytra with more broadly exposed and more rapidly rounding humeri than in any of the preceding, three-fifths (♀) to three-fourths (♂) longer than wide, a fourth to third wider than the prothorax; punctulation of the very deep striæ virtually wanting, the intervals very convex; sinus rather short and distinct. Length (♂♀) 14.0–15.7 mm.; width 4.8–5.3 mm. Lake Superior (Bayfield and Marquette).

erebea Csy.

11—Form elongate, not very stout, somewhat attenuated anteriorly, deep black, shining; head well developed, not quite three-fourths as wide as the prothorax; eyes moderate but prominent, the sulci feebly converging; antennæ fully half as long as the body in the male; prothorax relatively smaller than in most of the preceding species, only slightly wider than long, widest anteriorly, the sides coarsely

reflexed, arcuate, slightly oblique and straight, becoming faintly sinuate, posteriorly; angles rather blunt, though slightly prominent; base sinuate medially, arcuate and margined laterally, distinctly narrower than the very feebly sinuate apex; surface with widely separated ruguliform lines; impressions distinct, the anterior angulate; fovea linear, deep, finely punctate, extending beyond basal third, not attaining the base; elytra oblong-oval, convex, three-fourths longer than wide, two-fifths (♂) to fully one-half (♀) wider than the prothorax; sinus long and very feeble; striæ deep, impunctate, the scutellar similarly deep, long, the marginal impressed and medial, evident only in apical half; intervals very convex. Length (♂♀) 14.5–17.0 mm.; width 5.0–5.9 mm. Massachusetts, New York (Adirondack Mts.), New Jersey and Pennsylvania.

lachrymosa Newm.

The only species apparently entering this genus and which is unknown to me, is *agona* Horn; it is only 10 mm. in length, with red femora and very broadly rounded thoracic angles and occurs in Alaska. There are two forms at hand so close to *coracina* that I feel indisposed to name them at present; *coracina* occurs in typical form from Lake Superior to New York. One of the allied forms is larger and more elongate than typical *coracina* and is represented by three examples from Danville, Pennsylvania, the other is very much smaller, as shown by the smaller measurements given above, and was found by the writer at Buena Vista Spring, in the same state.

Refonia n. gen.

The type of this generic group was placed by LeConte in the same section as *coracina*, *stygica* and others, forming the preceding genus, but there are some features that indicate no very close affinity, although others may suggest this rather strongly, such as the long antennæ, the thoracic structure and, especially, the coarsely reflexed side margins. The form of the body is shorter, broader and less convex than in any *Euferonia*, but one of the chief distinguishing points is the opaque elytra, at least in the female, a decidedly Evarthrid character. Three other important differences reside in very much larger head, longer, straighter and more prominent mandibles and the four dorsal punctures of the elytra. The very large thoracic depressions bear no indication of their origin through the confluence of two foveæ; they are roughly rounded, punctate and their outer wall is the broadly reflexed side margin,

there being no trace whatever of the usual carina. The scutellar stria is well developed. Besides *mæsta* Say, the type of this genus, I know of no other species that can be included at present. However, in the LeConte table of *Pterostichus*, the species *superciliosus* Say, which is unknown to me, has apparently, by the context, four discal elytral punctures as in *mæstus*, but is said to have the thoracic angles carinate, the color purple and the surface shining; it is uncertain how close may be its affinities with *Refonia mæsta*.

Abacidus Lec.

This genus will include species of the *fallax* section, besides *permundus*, *planifer* and *hamiltoni*. It seems to be a valid generic group, the species having a strongly defined and isolated habitus.

Gastrosticta n. gen.

The chief distinguishing characteristics of this genus are the small size of the body, very polished integuments, pedunculated hind body, obsolescent lateral striæ of the elytra, the three dorsal punctures and the conspicuous coarse punctuation of the lateral parts of the abdomen, besides some mentioned in the above table of genera. The scutellar stria is wanting or extremely short. There are two distinct sections as follows:

Body more nearly parallel, the single pronotal foveæ very nearly longitudinal; hind thoracic angles apparently always obtuse and rounded. 2
Body shorter, more ventricose, the foveæ very oblique, deeper and shorter; hind angles less blunt, sometimes minutely and acutely prominent 5
2—Base of the prothorax but very little wider than the peduncle of the hind body 3
Base of the prothorax very distinctly wider than the peduncle 4
3—Body above black, polished, beneath piceous-black; antennæ piceous, with ferruginous hairs towards the tip; labrum deep piceous; palpi piceous; thorax before the middle as broad as the elytra, gradually much contracted behind; base hardly wider than the pedicel; lateral margin not depressed; edge not excurved behind; dorsal line slightly impressed; basal lines distinct, conspicuously punctured; elytra narrowed behind; striæ punctured; interstitial lines hardly convex; pectus impunctured; feet rufo-testaceous; postpectus and venter punctured. Length rather more than two-fifths of an inch [say 10.5 mm.]. Missouri. [*Feronia ventralis* Say] . . . . . **ventralis** Say
Body smaller, slender, pale testaceous in color, slightly darker beneath, the legs testaceous; head rather narrow, with only feebly prominent eyes; antennæ testaceous; mandibles small, strongly arcuate; pro-

thorax only a fourth or fifth wider than long; base much narrower than the apex, sinuate, barely wider than the peduncle; transverse impressions rather deep, the anterior sublineiform; linear foveæ with but very few punctures; elytra but very slightly wider than the prothorax and nearly four-fifths longer than wide, rather obtusely rounded in apical third; striæ very coarse, deep, rapidly fine at apex, the punctures strong, close-set, crenulating the moderately convex intervals; sixth stria but slightly less marked though becoming obsolete basally, the seventh subobsolete, although becoming deep apically. Length (♂♀) 8.5–8.8 mm.; width 2.5–2.65 mm. Texas. [*Pterost. putus* Csy.]..... **puta** Csy.

4—Form stouter, strongly convex, deep black, the legs more piceous, the tibiæ and tarsi rufescent; head well developed, the eyes rather prominent, the mandibles longer than in the preceding; antennæ moderate, slender, ferruginous; prothorax not quite a third wider than long; base feebly sinuate, narrower than the rather deeply sinuate apex; sides arcuate, less so and more oblique basally, the angles broadly rounded; surface with a few obsolescent ruguliform lines basally, the transverse impressions obsolete or very feeble; foveæ deep, with but few punctures, not attaining the base; elytra oblong-oval, the sides rounding behind from near the middle, also rapidly rounding at base, two-thirds longer than wide, evidently but not greatly wider than the prothorax; striæ deep, very obscurely or scarcely at all punctured, the sixth and seventh fine and obsolescent; intervals convex internally, the scutellar stria completely wanting. Length (♂♀) 10.3–10.5 mm.; width 3.3–3.6 mm. Indiana,—W. S. Blatchley. [*Feronia obscura* Say]..... **obscura** Say

Form less stout and less convex, more parallel, polished, obscure testaceous to piceous in color, the under surface and legs rufous; head well developed, with rather prominent eyes, much broader than in *puta* and with less arcuate mandibles, the sulci rather short, parallel; antennæ slender, pale ferruginous, nearly half as long as the body; prothorax barely a fifth wider than long; base rather deeply sinuate, distinctly narrower than the subequally sinuate apex; sides strongly but not widely, subequally reflexed and arcuate, the gutter extending inward at base for some distance; transverse impressions subobsolete; foveæ rather long, deep, more or less punctate, the punctures coarse; scutellum small, evenly triangular; elytra three-fifths longer than wide, not a fifth wider than the prothorax, the sides gradually rounding behind, rapidly at base, the sinus rather deep; striæ coarse and deep, not very coarsely, rather closely punctate, the sixth more or less evidently less deep, the seventh very fine and subobsolete except apically; marginal line distinct, rather nearer the edge than to the eighth stria; scutellar stria very short but evident; intervals strongly convex except laterally. Length (♂) 8.4–8.8 mm.; width 2.8–3.0 mm. Missouri (St. Louis)..... **amnicola** n. sp.

5—Body rather stout, strongly convex, polished, deep black above and below, the epipleura and legs rufous; head three-fifths as wide as the prothorax, somewhat elongate, the eyes only moderately prominent; sulci converging; mandibles short and arcuate; antennæ

scarcely extending to the thoracic base, dark ferruginous; prothorax much wider at apical third than at apex, two-fifths wider than long, the sides sharply but not broadly reflexed, strongly, evenly rounded to the very small basal sinus, the angles right and minutely prominent; base sinuate medially, margined in lateral third, much narrower than the distinctly sinuate apex; anterior impression rather deep and sublinear, the posterior obsolete; foveæ smooth, very deep, elongate-oval, discal; elytra two-thirds longer than wide, nearly a fourth wider than the prothorax, the arcuate sides more rounded at base, gradually arcuately converging in apical half; striæ deep, not coarsely but strongly and rather distantly punctate, obsolete at apex, the fifth very feeble, sixth and seventh subobsolete throughout; scutellar stria wholly wanting; intervals broadly convex internally; abdomen very coarsely, confluently punctured except medially. Length (♀) 9.7 mm.; width 3.3 mm. Texas. . **subacuta** n. sp.

Body stout, very convex, smaller, black or piceous-black and polished; under surface obscure, the legs brighter, rufous; head nearly as in the preceding, the eyes larger and more prominent; prothorax almost perfectly similar throughout, except that the anterior transverse impression is very feeble and diffuse, and that the hind angles are obtuse and blunt, not in the least prominent; elytra similar in form and proportion, the striæ much coarser, very deep and coarsely punctate, the fifth like the others, the sixth evidently feebler but distinct, the seventh subobsolete, all subobsolete or feeble at apex; scutellar similarly wholly wanting; intervals broadly and not very strongly convex; abdomen less coarsely and more loosely punctate. Length (♀) 7.7 mm.; width 2.8 mm. Texas (Houston). Taken by the writer. Louisiana—LeConte. [*Pterost. tumescens* Lec.]

tumescens Lec.

The species named *subacuta* above, answers so closely to LeConte's description of his *Evarthrus acutus*—placed in *Ferestria* by Leng—that I have for some time considered it to be identical, but on studying this description more carefully, it may be inferred that in *acutus* the head is large and obtuse, the antennæ black basally and the prothorax not at all narrowed at apex, which is scarcely emarginate. Furthermore, in identifying it as *Evarthrus acutus* we should have to assume that LeConte overlooked the three dorsal punctures of the elytra, and also the very coarse confluent abdominal punctures of *subacuta*. This must be admitted, however, to be a striking instance of parallelism in two different generic groups.

Cryobius Chd.

The met-episterna in this genus, though short enough to distinguish the numerous components from the smaller forms of the *Ar-*

gutor series, are less visibly abbreviated than in any of the preceding generic groups, in some cases becoming slightly elongate. The species are so numerous, small in size and usually so poorly represented in collections, that *Cryobius* should be considered perhaps the most difficult, taxonomically, of the subfamily Pterostichinæ, and my own collection includes but very few of the known components. A large consignment, recently received from St. Paul Island, in Bering Sea, includes five species, of which four seem worthy of description at the present time as follows:

Cryobius otariidinus n. sp.—Elongate-suboval, convex, rather stout and shining, with very obscure subcupreous lustre on the elytra, black above and beneath, the legs dark rufous; head rather large and but feebly convex, nearly three-fourths as wide as the prothorax, with very moderate though prominent eyes, placed near the base, the neck very short; mandibles black, rufous distally; palpi deep black with abruptly pale tip; antennæ rather thick and short, black, the first joint rufous to piceous; prothorax nearly one-half wider than long, widest barely before the middle, the sides rather strongly rounded, finely reflexed throughout, oblique and broadly, feebly sinuate basally, the angles right and sharp; base transverse, equal in width to the deeply sinuate apex, not margined at the sides; apical angles prominent, blunt at tip; impressions feeble; inner foveæ deep, extending almost to the middle, curving outwardly basally, the outer wanting or represented by a very small feeble basal puncture; surface between the inner foveæ and the sides evenly convex; elytra one-half to three-fifths longer than wide, oval, with evenly arcuate sides, a third or more wider than the prothorax, widest at the middle; striæ fine and feeble, unimpressed, with feeble but evident uneven punctulation, the scutellar very short; intervals flat; dorsal punctures four, the two posterior closer. Length (♀) 8.0–9.0 mm.; width 3.2–3.35 mm. Alaska (St. Paul Island). Two specimens.

By the characters given by LeConte, this species would come near *vindicatus* Mann., but the first and second striæ are not united behind by a "deeper hook," and the scutellar stria is very short as a rule, though in the second specimen, having slightly more elongate elytra, it is long, forming the oblique basal part of the first stria; *vindicatus* is from Kodiak Island.

Cryobius beringi n. sp.—Elongate, convex, shining, black, without distinct metallic lustre, the legs piceo-rufous; head elongate, the eyes moderate in size and prominence; maxillary palpi deep black, the extreme tip abruptly pale testaceous; antennæ black, the basal joint rufescent; prothorax a third wider than long, the base feebly sinuate medially, straight and unmargined laterally, about as wide as the moderately sinuate apex, widest just before the middle, where the sides are feebly, subprominently rounded, thence feebly converging and slightly arcuate to

apex and slightly more oblique and broadly sinuate to the base, the margin sharply, evenly and not broadly reflexed; anterior impression deep, the posterior obsolescent; inner fovea long, coarse and deep, attaining base, the outer shallow, feebly punctate, delimiting a sharp carina along the sides basally; elytra almost twice as long as wide, inflated and much broader behind the middle, fully two-fifths wider than the prothorax; striæ fine, feeble or subobsolete externally, slightly impressed, distinct and punctate internally, the scutellar moderately long but imperfect; dorsal punctures two, just behind the middle and at apical fifth; female with two apical abdominal punctures at each side. Length (♀) 8.0 mm.; width 3.0 mm. Alaska (St. Paul Island).

This is a remarkably distinct species in general habitus, because of the unevenly rounded, basally broadly sinuate sides of the prothorax and the long and posteriorly inflated elytra.

Cryobius delicatus n. sp.—Body very small, narrow and elongate, deep black and polished, without metallic lustre; femora bright rufous, tibiæ piceous, the tarsi black; head moderate, short, with very prominent eyes, the sulci rather long, converging; antennæ black, piceous basally, rather thick; palpi black, tipped with testaceous; prothorax fully a third wider than long, widest well before the middle, the sides broadly arcuate and very moderately converging anteriorly, arcuately oblique in nearly basal half, sinuate behind, becoming subparallel before the angles; base not margined laterally, slightly narrower than the apex, which is moderately sinuate, with broadly rounded angles; anterior impression very faint, angulate, the posterior obsolete; inner fovea linear, rather fine, widely separated from the base, the surface thence laterally flat and feebly punctulate to a short fine carina near the sides; elytra three-fourths longer than wide and two-fifths wider than the prothorax, parallel, with evenly arcuate sides; striæ finely, feebly punctate, impressed internally, very feeble externally, the scutellar very short; dorsal punctures fine, four or five in number. Length (♂ ♀) 5.5–5.8 mm.; width 1.8–2.1 mm. Alaska (St. Paul Island).

In the female the elytra are broader and more strongly arcuate at the sides than in the male described above, but they are similarly parallel and symmetrical.

Cryobius breviusculus n. sp.—Relatively shorter and broader than any of the preceding, shining and piceous, more rufous beneath, the abdomen black; legs rufous throughout; head well developed, triangular, with rather large but only moderately prominent eyes, the sulci parallel; antennæ thick, bright testaceous, gradually infuscate beyond the middle; palpi ferruginous throughout; prothorax two-fifths wider than long, widest at anterior third, where the sides are evenly rounded to the apex, gradually less arcuate and oblique posteriorly and becoming gradually broadly sinuate near the sharp right angles; base not margined laterally, slightly less broad than the broadly sinuate apex, the apical angles not very broadly rounded; transverse impressions both distinct though shal-

low; inner fovea long, linear, attaining the base, the outer linear, three-fourths as long as the inner, the carina long, confluent with the sides at the basal angles; intervening surface nearly flat, punctate; elytra oblong-oval, not quite one-half longer than wide, a third wider than the prothorax, rather obtuse behind, the sinus deep and rather narrow; striæ fine, subequal throughout, barely at all impressed and feebly punctulate suturally, the scutellar nearly obsolete; intervals almost flat; marginal stria fine, distinct, much nearer to the side than to the eighth, the ocellate punctures very large, widely spaced medially. Length (♀?) 7.3 mm.; width 3.0 mm. Alaska (St. Paul Island).

The anterior tarsi are missing in the type of *breviusculus*, where the abdominal apex has four punctures; the met-episterna are a little longer than wide and the dorsal punctures of the elytra are two in number, well behind the middle and near apical fifth. The subapical sinus of the elytra is rather short and deep in *beringi* and *breviusculus*, but in *delicatus* it is longer and so feeble as to be barely traceable; in the latter species there is one apical abdominal puncture at each side in the male and two in the female.

I am unable to place any one of these species in the table given by LeConte, but for the present they can come in just after *vindicatus* Mann. By far the largest series received in the lot mentioned, amounting to some thirty-six specimens, consists of a species of bright bronze lustre, with the thoracic sides evenly arcuate from apex to the faint and gradual basal sinus, the base narrowly and very obsoletely margined at each side and with slightly convex unmodified surface between the linear fovea and the sides, the elytral striæ distinctly impressed internally, with the scutellar rather long, and the dorsal punctures three or four in number; it is probably also allied to *vindicatus*, but is different from any of those here described.

Paraferonia n. gen.

Nothing is known to me concerning *Pterostichus lubricus* Lec., the type of this genus, except the meagre data so far published, but I am disposed to think that is is placed above in a nearly correct position in the series; its resemblance to *Piesmus* is probably purely superficial, however, and I assume that the met-episterna are short.

Pœcilus Bon.

The probabilities are that the species described by the writer under the name *snowi* (Mem. Col., IV, 1913, p. 137) is the same as

mexicanus Chd. (l'Abeille, 1875, p. 44). At all events, the characters given by Chaudoir to distinguish his *mexicanus* from *cyanicolor* Chd. (*cyaneus* || Lec.) fit *snowi* very well; that is: it is much larger than *cyanicolor*, similar in coloration and with a notably more elongate prothorax. *Mexicanus* is said by Bates to occur at Guanajuato and Oaxaca; *snowi* was described from extreme southern Arizona.

Dysidius Chd.

This genus is very exceptional among the allies of *Pterostichus* in having male sexual characters recalling those of *Amara*, but here the pubescence on the inner side of the posterior male tibiæ is of a somewhat different character, being coarser and erect. Besides *mutus* Say, the genus will include *purpuratus* Lec., and the following varietal form:

Dysidius purpuratus ssp. **trinarius** nov.—Similar in almost every way to *purpuratus*, but less robust and with the elytral coloration still more shining and metallic, being of a more æneo-purpurate character; it also differs in having the sides of the elytra more gradually rounding at base; subapical sinus of the elytra a little shorter and more distinct. Length (♂) 11.5–12.8, (♀) 11.7–14.0 mm.; width (♂) 3.8–4.6, (♀) 4.3–5.0 mm. Pennsylvania (Camphill),—A. B. Champlain. A large series.

LeConte described his *purpuratus* from Ohio, and the differences noted distinguish the species as it occurs to the west and east of the Appalachian Mountains. I have had occasion to notice this geographic differentiation in several other cases, such as *Cicindela* and *Tetraopes*. The dimensions of my single female representative of *purpuratus* are 14.5 by 5.5 mm.

Parargutor n. gen.

The species are, so far as known, few in number in this generic group, which is peculiar to the true Pacific coast fauna. There are two distinct species in my collection at present, which may be known easily as follows:

Body subparallel, moderately convex, black, shining, the legs black or piceous-black, the anterior male tarsi ferruginous to piceous; head fully three-fifths as wide as the prothorax, the sulci feebly converging; front convex, with some irregular longitudinal strigilation laterally; antennæ black, the tip ferruginous, about as long as the head and prothorax, the latter very evidently wider than long, the sides distinctly sinuate basally, the foveal region abundantly punctate,

especially within; fovea attaining the base, which is as wide as the sinuate apex; elytra two-thirds longer than wide, a fourth wider than the prothorax, the striæ very moderately impressed, the intervals feebly convex; joints of the middle and posterior tarsi deeply sulcate externally; male with one, the female with two, apical abdominal punctures at each side. Length (♂ ♀) 9.5–11.5 mm.; width 3.5–4.2 mm. Middle and northern California and Nevada (Reno). A large series..... **lustrans** Lec.

Body nearly similar but more elongate, similar in coloration and lustre; head less than three-fifths as wide as the prothorax, almost as in *lustrans*, the antennæ (♂) longer than the head and prothorax, the latter not distinctly shorter than wide, somewhat more noticeably so in the female; sides basally oblique but barely perceptibly sinuate, the angles minutely sharp and subprominent; base a little wider than the deeply sinuate apex in the male; foveal region strongly punctate, the foveæ similar; elytra longer, fully three-fourths longer than wide, nearly a third wider than the prothorax; striation nearly as in *lustrans;* anterior tarsi of the male differing greatly in being black and not obscure ferruginous. Length (♂ ♀) 10.7–11.8 mm.; width 4.0–4.1 mm. Oregon (Clackamas Co.). Two examples. **atrolucens** n. sp.

The met-episterna, sides of the metasternum and latero-basal parts of the abdomen, are punctate in both these species, the punctures a little coarser in *atrolucens*, but, as usual, these punctures are notably variable in number in different individuals. In *lustrans* the male is smaller than the female, but this is not noticeable in *atrolucens*.

Pseudargutor n. gen.

So far as examined, literature seems to show that no distinctive generic name has ever been given the remarkably isolated *Feronia erythropus*, of Dejean. It was described under the name *nitidus* by Kirby, and placed in *Platyderus* Steph., a genus of peculiarly southern European range, and apparently assuming, in those regions, very nearly the rôle that *Loxandrus* does in North America. There is something about *erythropus*, besides the occasional feebly opalescent lustre, that reminds us of *Loxandrus*, but the anterior tarsi of the male are perfectly symmetric.

Micromaseus n. gen.

The species of this genus, known to me thus far, are *femoralis* Kirby and *desidiosus* Lec., *corusculus* Lec. and *patruelis* Dej., all very small species, remindful of *Cryobius*, but with much smaller head and dif-

fering decisively, of course, in the longer met-episterna. *Desidiosus* very closely resembles *femoralis*, and does not seem to differ materially in strial punctuation as stated by LeConte, but it is nevertheless distinct in its entirely rufous legs, more abbreviated form of the body and more oval elytra. The following is allied to *femoralis* and *desidiosus* in strial punctuation, but differs in the form of the prothorax:

Micromaseus æquicollis n. sp.—Body elongate, moderately convex, very shining, the type ferruginous but very immature, probably nearly black in maturity; femora not quite so dark as the tibiæ; head four-sevenths as wide as the prothorax, with large though but slightly prominent eyes and unusually short sulci; antennæ half as long as the body, very slender and equally filiform, the basal joint nearly twice as thick as the remainder; prothorax widest exactly at the middle, parallel, scarcely visibly shorter than wide, the sides very evenly and equally arcuate from apex to base, the basal angles sharp and minutely, feebly prominent; base as wide as the rather deeply sinuate apex; surface wholly impunctate, the fovea not long, rather narrow and not attaining the base, which is finely margined, the margin interrupted medially; median stria extremely fine; elytra three-fourths longer than wide, scarcely a fifth wider than the prothorax; striæ rather coarse, not very deep and strongly punctured, more closely than in *femoralis;* scutellar stria rather long and finer, punctured, interrupted basally in the type; intervals only feebly convex. Length (♂) 6.0 mm.; width 2.0 mm. Missouri (St. Louis).

The peculiar form of the prothorax, which is widest at the middle and with perfectly parallel and evenly arcuate sides throughout, will enable one to identify this species at once. The single type specimen is extremely immature.

I have at present no representative of *Pterostichus obesulus* or *splendidulus* of LeConte, but, from the published characters, they should apparently each form the type of a peculiar generic group.

Loxandrus Lec.

Megalostylus || Chd.

The peculiar neatness of appearance, the highly polished integuments, generally with distinct iridescent lustre, and the remarkable fleetness of foot characterizing the species of this genus, might, with some unscientific license, justify us in regarding them as the grayhounds of the Pterostichinæ. The species are very numerous and probably number far more than one hundred. They are essentially southern, only a few occurring as far to the northward as the

latitude of Pennsylvania, and they are particularly abundant in the regions bordering the Gulf of Mexico. Some of the few Mexican and South American species placed in this genus by Bates, such as *sculptilis* and *opaculus*, certainly are far from being typical *Loxandrus*, and should probably be separated generically. The genus is also recorded by Bates as occurring in Celebes and Australia, but I doubt the correctness of the identification very much. Possibly *Loxandrus tetrastigma* Bates, from Mexico, may also form a different genus, as it differs decidedly in habitus from the normal forms. In fact it seems probable that the genera allied to *Loxandrus* should form a natural tribal group in the subfamily Pterostichinæ.

In regard to our own species, I have in my collection twenty-six, scarcely more than a fourth of which can be identified with any previously described and of these a few are doubtful, owing to the very inadequate descriptions of some earlier authors. These species may be described as follows:

Elytra uniform in coloration.....2
Elytra with a small rounded sutural rufous spot near the apex; size small.....20
2—Prothorax broadly reflexo-explanate at the sides posteriorly; largest species of the genus.....3
Prothorax not distinctly reflexed at the sides posteriorly.....4
3—Body rather broad, more parallel, moderately convex, deep black, the elytra distinctly iridescent; legs black, the tibiæ and tarsi piceous; head well developed, nearly three-fifths as wide as the prothorax, the anterior sulci small and feebly impressed; antennæ long, very slender, infuscate, the three basal joints and the palpi ferruginous; prothorax large, fully two-fifths wider than long, parallel, the sides very evenly arcuate from apex to the broadly rounded basal angles; apex deeply sinuate, evidently narrower than the base, which is feebly sinuate medially as usual, finely margined laterally; transverse impressions not evident; apical margin without trace of a fine incised parallel line except laterally; stria fine, biabbreviated; surface with a few scattered punctures medially toward base, the elongate foveæ rather coarsely impressed; lateral explanature moderate; elytra oblong, one-half longer than wide, barely a fifth wider than the prothorax, the striæ coarse and very deeply impressed, strongly punctured, the punctures obsolete posteriorly; intervals strongly convex; subapical sinus short, distinct. Length (♂♀ 12.0–13.5 mm.; width 4.6–5.1 mm. Louisiana (Monroe). Eleven specimens.....**saphyrinus** Chd.
Body much narrower, more elongate-suboval, rather more convex, similar in coloration throughout, the elytra having feebler iridescence; head narrower and rather more elongate; antennæ not quite so

slender or elongate, fusco-testaceous, paler basally, the palpi pale; prothorax relatively not quite so large, two-fifths wider than long; apex sinuate but scarcely at all narrower than the base, similarly without trace of a fine incised submarginal line except laterally; sides evenly but less strongly arcuate, more coarsely and strongly reflexed, finely so apically, rapidly more broadly basally; anterior transverse impression evident; surface otherwise nearly as in the preceding, the hind angles very broadly rounded; base finely margined toward the sides; elytra more oval, arcuately narrowing from near the middle, less obtuse at apex, more convex, more than one-half longer than wide, a fourth wider than the prothorax; striæ deep but rather less coarse, very distinctly but somewhat less coarsely, crenulately punctate except posteriorly, the intervals not quite so convex; sixth and seventh striæ abruptly subobsolete; they are much like the other striæ in *saphyrinus*, the seventh there distinct but feebler. Length (♀) 13.5 mm.; width 4.6 mm. Florida (Sarasota),—Blatchley. . . . . **lateralis** n. sp.

4—Hind angles of the prothorax obtuse and more or less obviously rounded, or at least blunt at tip, though never so broadly rounded as in the two preceding; body small to rather large in size. 5

Hind angles not at all rounded, generally minutely and feebly subprominent. 17

5—Legs rufous, either throughout or rarely with only the femora wholly or partially darker. 6

Legs black or dark almost throughout, the tarsi generally paler. 14

6—Species of moderately large size, 8–13 mm. 7

Species notably small in size, not materially exceeding 7 mm. in length. . 10

7—Incised line along the thoracic apex entire, angulate. 8

Incised line arcuate, completely though not broadly interrupted at the middle. 9

8—Form suboblong, rather convex, black, the legs dark rufous; elytra with moderate iridescence; head rather large, not longer than wide, with moderate and prominent eyes, the sulci short, feebly and diffusely impressed as usual; mandibles piceous-black; antennæ slender, fusco-testaceous, a little clearer basally; prothorax large, nearly two-fifths wider than long, the sides parallel and only very moderately though subevenly arcuate, not coarsely but abruptly and evenly reflexed throughout; basal angles very obtuse, somewhat rounded; apex deeply sinuate, much narrower than the base, the angles rather sharp and distinct; surface with scattered punctures at base between the foveæ, the latter coarse and deeply impressed; base margined from the foveæ to the sides as in the preceding; elytra three-fifths longer than wide, almost a fourth wider than the prothorax, oblong, the subapical sinus rather feeble; striæ rather coarse and impressed, strongly, very closely punctured, the seventh feebler basally; intervals moderately convex. Length (♀) 12.5 mm.; width 4.4 mm. District of Columbia,—Ulke. . . . . **rectus** Say

A—Almost similar but a little narrower, the head somewhat smaller and more elongate, the mandibles bright rufous, becoming black distally; prothorax less transverse, a third wider than long; apex

less distinctly narrower than the base and with the angles broadly rounded, otherwise nearly as in *rectus;* elytra nearly similar, though relatively broader, the seventh stria still finer and more nearly obsolete except posteriorly. Length (♂) 11.5 mm.; width 4.0 mm. District of Columbia,—Ulke.....**mandibularis** n. subsp.

B—Form shorter and broader than in *rectus*, similar in coloration and striation, the head notably smaller, but little more than half as wide as the prothorax, the mandibles as in *rectus;* prothorax relatively not so large, a third wider than long, otherwise nearly similar, except that the hind angles are less obtuse, with the apices only blunt and not distinctly rounded; elytra rather shorter, more obtuse at apex but with deeper subapical sinus, similarly striate and punctured. Length (♂) 11.0 mm.; width 4.3 mm. Texas (Galveston).....**laticollis** Chd.

Form less broad, more nearly as in *lucens*, black, the legs ferruginous; elytral iridescence rather feeble; head moderate, longer, with longer neck and rather prominent eyes, four-sevenths as wide as the prothorax; mandibles faintly rufescent basally, the labrum, antennæ and palpi bright ferruginous; prothorax shorter, very nearly one-half wider than long, the parallel sides very evenly and rather strongly arcuate and finely reflexed from apex to the very obtuse and rather rounded basal angles; base margined laterally, wider than the deeply sinuate apex; foveæ deeply depressed, not quite attaining the base, the margination of the latter extending inward slightly beyond them; elytra three-fifths longer than wide, more than a fourth wider than the prothorax; striæ rather coarse but not very deep, the punctures not strong or very close-set and feebly crenulating the intervals, which are only very moderately convex, the seventh stria feeble basally; sinus rather short and distinct. Length (♀) 10.0 mm.; width 3.7 mm. District of Columbia,—Schwarz.....**limatus** n. sp.

Form still narrower, the size much smaller, black; epipleura, sides of the prosternum and almost the entire abdomen rufescent; legs pale ferruginous; elytra strongly iridescent; head two-thirds as wide as the prothorax, with long neck, moderate but very prominent eyes and ferruginous antennæ, palpi and labrum; mandibles obscure rufous, blackish distally; prothorax of different form, not quite one-half wider than long, widest rather before the middle; base scarcely so wide as the apex and very finely margined laterally, with extremely obtuse and rather rounded angles; sides subevenly arcuate, finely subevenly reflexed; anterior impression obsolete, the posterior feeble; surface with a few punctures scattered near the foveæ, the latter rather short, narrow and deep, not attaining the base; elytra oblong-oval, very moderately convex, one-half longer than wide, not quite a third wider than the prothorax, the striæ moderately coarse, not very deep, finely and not at all conspicuously punctate, the punctures very finely subcrenulating the intervals, which are almost flat, the seventh stria feeble basally; sinus rather short, distinct. Length (♀) 8.0 mm.; width 2.8 mm. Texas (Houston)....**collucens** n. sp.

9—Surface rather depressed, black, the legs dark rufous, the elytra with bright iridescence; head three-fifths as wide as the prothorax, with

rather long neck and large prominent eyes; antennæ, palpi and labrum dark ferruginous; prothorax parallel, with evenly and strongly arcuate and very finely reflexed sides; base somewhat wider than the deeply sinuate apex, finely margined laterally, the angles very obtuse, rounded; incised line behind the apex extremely narrowly interrupted at the middle; stria very fine and incomplete, the surface with a band of dispersed punctures between the foveæ, the latter rather narrow and deep, not attaining the base; elytra oblong-oval, three-fifths longer than wide, less than a fourth wider than the prothorax; striæ very moderate, shallowly groove-like, with very fine punctures, the intervals nearly flat; seventh stria fine only near the base; sinus rather short and distinct. Length (♀) 9.8 mm.; width 3.35 mm. Texas (locality unrecorded).....**lucens** Chd.

Surface rather more convex, black, the legs dark rufous; epipleura and abdomen faintly rufescent; elytra with moderate iridescence; head two-thirds as wide as the prothorax, with long neck and moderate, prominent eyes, not as large as in the preceding; antennæ a little less elongate but similarly ferruginous; prothorax not quite one-half wider than long, widest distinctly before the middle, with the sides rounded, rather less so basally, finely reflexed; base about as wide as the deeply sinuate apex, finely margined laterally, the angles broadly rounded; apical incised line very fine, rather broadly and completely interrupted medially; surface with very few extremely small punctures near the foveæ, the latter narrow and deep, not attaining the base; elytra scarcely a fourth wider than the prothorax, one-half longer than wide, more obtuse at apex than in *lucens*, the sinus a little longer; striæ moderate though deep and groove-like, the punctures small, minutely crenulating the intervals, which are very moderately convex; seventh stria very feeble except apically. Length (♀) 8.7 mm.; width 3.0 mm. Lousiana (Cane River). One example taken by the writer.....**ludovicianus** n. sp.

10—Femora all blackish, the tibiæ and tarsi dark rufous. Body moderate in width and convexity, black, the elytra feebly iridescent; head small, slightly over half as wide as the prothorax, with rather long neck and large eyes, the sulci very short, feeble and indefinite; antennæ fuscous, very slender, the three basal joints in great part testaceous, the palpi pale; mandibles small; prothorax a fifth wider than long, the apex feebly sinuate, with obtusely rounded angles and a little narrower than the base, which is margined except medially and with rounded, moderately obtuse angles; sides moderately, subevenly arcuate, narrowly reflexed and diaphanous, less rufous apically; apical incised line entire; impressions obsolete; foveæ narrow, deep, punctured and almost attaining the base; elytra less than one-half longer than wide, fully a third wider than the prothorax, rapidly and obtusely rounded behind, the sides also more rounding basally, the sinus short, distinct; striæ rather coarse and deeply impressed, strongly punctate except apically, the seventh obsolescent basally; intervals rather strongly convex. Length (♀) 6.8 mm.; width 2.5 mm. Pennsylvania (Harrisburg),—Champlain.....**agilis** Dej.

Femora all rufous, but clouded with blackish beneath. Moderately

broad and rather feebly convex, black, sometimes piceous anteriorly, the elytra very feebly iridescent; head relatively larger than in *agilis*, with moderate but prominent eyes, two-thirds as wide as the prothorax; antennæ slender, fuscous, the three basal joints and palpi pale, the labrum rufous; prothorax nearly a fourth wider than long, the deeply sinuate apex a little narrower than the base and with somewhat prominent though blunt angles; base margined except medially, the angles moderately obtuse, with slightly blunt apex; surface with scattered punctures medio-basally, very fine stria and obsolete apical incised line, the latter visible laterally and sometimes very faintly traceable medially; foveæ deep, not quite attaining the base; sides moderately, subevenly arcuate, narrowly reflexed and diaphanous; elytra nearly one-half longer than wide, a third wider than the prothorax, parallel, rapidly and obtusely rounded behind, with distinct sinus and with posteriorly diaphanous margins, the suture dull rufous posteriorly; striæ rather fine and groove-like, finely, rather obscurely punctate, the seventh gradually finer basally; intervals but very moderately convex; sides beneath and abdomen slightly rufous. Length (♀) 6.2–6.35 mm.; width 2.25–2.4 mm. Texas (Galveston).....**tæniatus** Lec.

Femora rufous, the posterior however more obscure than the two anterior. Body black and moderately convex, almost entirely black beneath; elytra feebly iridescent; head elongate, with moderately prominent eyes and distinct neck, three-fifths as wide as the prothorax; labrum and mandibles rufous, the latter blackish at tip; antennæ very slender, piceous, the three basal joints and the palpi pale testaceous; prothorax parallel, a fifth wider than long, the sides broadly, subevenly arcuate, the margin narrowly reflexed, diaphanous posteriorly; apex moderately sinuate, with very blunt angles and only very little narrower than the base, which is margined only from the line of the foveæ outwardly, the angles obtuse and rounded; apical incised line entire and broadly angulate, the stria very fine, incomplete as usual; impressions obsolete; scattered subbasal punctures minute and very few; foveæ narrow, deep, not attaining the base; elytra rather more than one-half longer than wide, fully a fourth wider than the prothorax, gradually arcuately rounded behind from near the middle; sides subevenly arcuate; suture feebly rufescent posteriorly; striæ not fine, rather deep, scarcely impressed, the punctures not coarse but strong and crenulating the intervals, which are barely at all convex; seventh stria fine, completely obsolete basally. Length (♀) 6.5 mm.; width 2.4 mm. Florida (Dunedin),—Blatchley.

suturalis n. sp.

Femora all bright rufous; apical incised line of the prothorax distinct and entire.....11

11—Elytra arcuately rounded behind from near the middle.....12

Elytra parallel, rapidly and more obtusely rounded behind.....13

12—Form rather elongate and convex, deep black, more piceous beneath; elytra with the feeblest vestiges of iridescence; head smaller and more elongate than in *suturalis*, but little more than half as wide as the prothorax, the neck long, the eyes well developed and prominent;

antennæ very slender, fusco-testaceous, paler basally, the palpi pale; labrum rufous, the mandibles notably small; prothorax scarcely a fifth wider than long, the sides evenly and moderately arcuate, finely reflexed, only a little paler basally; apex moderately sinuate, with less blunt angles than in *suturalis* and much narrower than the base, which is margined nearly to the middle, the angles obtuse and bluntly rounded; impressions barely traceable, the scattered medio-subbasal punctures fine and very few; foveæ narrow and deep, longer than in *suturalis* though not attaining the base; elytra rather more than one-half longer than wide, a third wider than the prothorax, the sides a little more rounded basally, the subapical sinus rather long, only moderately deep; striæ and punctures throughout nearly as in the preceding, the intervals a little more convex. Length (♂) 6.3 mm.; width 2.35 mm. Florida (Sarasota),—Blatchley.

cervicalis n. sp.

Form somewhat elongate-oval, rather strongly convex, rufo-piceous, paler anteriorly and beneath; elytra barely perceptibly iridescent; head not large, elongate and with rather large and prominent eyes, two-thirds as wide as the prothorax; labrum and mandibles rufous, the latter tipped with blackish; antennæ slender, piceous, the first three joints and the palpi pale testaceous; prothorax nearly a third wider than long, parallel, with very evenly though moderately rounded sides and finely reflexed edges; apex barely visibly narrower than the base, feebly sinuate, with obtuse angles, the base finely margined except medially, the angles obtuse and very blunt; impressions obsolete, the fine stria distinct; medio-subbasal punctures very few; foveæ very narrow, moderate in depth, widely separated from the base; elytra oblong-oval, more than one-half longer than wide, nearly one-half wider than the prothorax, the sides a little more rounded basally, the subapical sinus rather feeble; striæ fine but deeply impressed, very finely but distinctly punctate, the seventh obsolescent basally; intervals moderately though distinctly convex. Length (♀) 5.75 mm.; width 2.2 mm. Florida (LaBelle),—Blatchley. . . . . **mundus** n. sp.

13—Form and general characters very nearly as in *tæniatus*, but with very pale and uniform ferruginous legs, smaller and narrower head and complete and distinct apical incised line of the prothorax, rather depressed, black, the thoracic side margins, a medio-basal area and the elytral suture, apically, rufescent; under surface not paler; elytra with moderate iridescence; head elongate, with moderately prominent eyes, but little more than half as wide as the prothorax, the neck long; labrum and mandibles dull rufous, the palpi pale; antennæ slender, nearly as in *tæniatus* but not quite so long; prothorax a fourth wider than long, parallel, with very evenly, moderately rounded sides; apex moderately sinuate, a little narrower than the base and with rather blunt angles; base margined, except in the rufous median area, the angles obtuse and distinctly rounded; foveæ rather deep, punctulate, well separated from the base; elytra one-half longer than wide, fully a third wider than the prothorax, obtusely

rounded in apical third; striæ not very fine but shallow and groove-like, with small, close-set and rather indistinct punctures, the seventh finer though distinct basally; intervals barely more than flat. Length (♀) 6.0 mm.; width 2.2 mm. Texas (Galveston).

accelerans n. sp.

Form more elongate and parallel, feebly convex, black, the thoracic base and distal parts of the elytral suture feebly rufescent; under surface piceous-black, the legs pale; elytra not distinctly iridescent; head elongate, with long neck and rather large prominent eyes, four-sevenths as wide as the prothorax; labrum and mandibles dull rufous, the latter blackish distally; antennæ fusco-testaceous, clearer basally, the palpi pale; prothorax a fourth wider than long, subparallel, with very evenly, moderately rounded sides, the edge finely reflexed; apex deeply sinuate, with distinct though blunt angles, very much narrower than the base, which is margined, except medially, and with blunt and moderately obtuse angles; impressions obsolete; medio-subbasal punctures very few, feeble and indefinite; foveæ deep, almost attaining the base; elytra more than one-half longer than wide, only a fourth wider than the prothorax, rapidly and obtusely rounded at apex, parallel, with the nearly straight sides gradually rounding basally; subapical sinus very moderate; striæ moderate, groove-like, distinctly though finely, subcrenulately punctate, the seventh distinct though finer; intervals broad, barely at all convex, rapidly very narrow on the apical slope, where the striæ become coarser. Length (♂) 7.0 mm.; width 2.7 mm. Louisiana (Monroe). A single example taken by the writer. . . . . **parallelus** n. sp.

14—Prothorax widest posteriorly. Body moderately stout and unusually convex, highly polished and deep black, the elytra without evident trace of iridescence; under surface and legs black, the tarsi rufous; head four-sevenths as wide as the prothorax, slightly elongate, with long neck and rather large prominent eyes; antennæ piceous, the first joint pale; mandibles blackish, the labrum dark; palpi testaceous; prothorax scarcely a fourth wider than long, the sides broadly, subevenly arcuate, gradually converging from near the base to the apex, which is very moderately sinuate, with broadly rounded angles and much narrower than the base, the latter strongly margined except medially and with obtuse and distinctly rounded angles; lateral margins strongly reflexed, narrowly toward apex and more broadly posteriad, the surface declivously subexplanate basally; impressions obsolete, the incised apical line entire; medio-subbasal punctures few but distinct; foveæ only a fourth the total length, not quite attaining the base, deep; elytra one-half longer than wide, only a fifth wider than the prothorax, ogival in apical third, the sides parallel and very feebly arcuate, more so basally the sinus short and deep; striæ rather coarse and deep, strongly and crenulately punctate, the seventh obsolescent except apically; intervals broadly and moderately convex. Length (♂) 9.3 mm.; width 3.5 mm. Florida (Dunedin),—Blatchley. Tampa,—LeConte. . . . . **calathinus** Lec.

Prothorax more of the usual form, widest at or near the middle; lateral thoracic margins finely, evenly reflexed throughout the length. . . 15

15—Pronotum narrowly deplanate at the sides basally. Elongate-suboval, rather strongly convex, very shining, deep black, the tarsi rufous; anterior tibiæ paler than the others; elytra without any very obvious trace of iridescence; head small, with long neck and well developed eyes, four-sevenths as wide as the prothorax; mandibles black, the palpi pale; antennæ nearly black, testaceous basally; prothorax nearly a third wider than long, the sides very evenly, moderately rounded; apex sinuate, distinctly narrower than the base, the incised line deep, the stria deep and almost entire; base margined except medially, the angles broadly obtuse, rounded; anterior impression obsolete, the posterior feeble, the medio-subbasal punctures evenly scattered and distinct; foveæ deep, not quite attaining the base; elytra one-half longer than wide, fully a fourth wider than the prothorax, arcuately narrowing behind the middle, the sides feebly, subequally arcuate to the base, the sinus short, unusually deep; striæ somewhat coarse, strongly and conspicuously, subcrenalately punctate, the seventh obsolete basally; intervals rather strongly convex. Length (♀) 7.6 mm.; width 2.75 mm. Florida (Dunedin), —Blatchley..... **cursitans** n. sp.

Pronotum not deplanate at the sides basally..... 16

16—Form rather stout and subventricose, highly polished, deep black, the tarsi paler; elytra feebly iridescent; head elongate, with prominent eyes and long neck; mandibles blackish throughout; antennæ fuscous, testaceous basally; prothorax barely a fourth wider than long, the sides very evenly, moderately arcuate; apex moderately sinuate, evidently narrower than the base, which is finely margined laterally and with broadly obtuse rounded angles; apical incised line very fine and feeble, interrupted at the middle; impressions feeble, the stria very fine; medio-subbasal punctures almost wanting; foveæ narrow and deep, distinctly separated from the basal margin; elytra one-half longer than wide, fully two-fifths wider than the prothorax, rather rapidly, arcuately narrowing in about apical third; sides slightly more arcuate basally, the subapical sinus short and notably shallow; striæ rather fine but well impressed, the punctures distinct and subcrenulate but not coarse; seventh stria obsolete basally; intervals broadly convex. Length (♀) 8.6–9.5 mm.; width 3.4–3.5 mm. Florida (Dunedin),—Blatchley..... **comptus** n. sp.

Form much narrower, not so ventricose and not quite so convex, similarly colored, the elytra feebly iridescent; head barely at all elongate, with large prominent eyes and moderate neck, nearly two-thirds as wide as the prothorax; mandibles obscure rufous, blackish distally; antennæ piceous, testaceous basally, the palpi pale; prothorax a fourth to third wider than long, the parallel sides evenly and rather strongly arcuate; apex rather deeply sinuate, much narrower than the base, with but slightly blunt prominent angles and very fine and feeble though entire incised line; base finely margined laterally, with broadly obtuse and rounded angles; impressions both feeble, the stria very fine, biabbreviated, the medio-subbasal punctures minute, few or wanting; foveæ narrow, deep, far from attaining the base; surface very feebly declivously flattened postero-lat-

erally but not explanate; elytra three-fifths longer than wide, about a fourth wider than the prothorax, evenly ogival in apical two-fifths, the sides a little more arcuate basally; subapical sinus short and moderate; striæ and punctures throughout nearly as in the preceding, the intervals rather less convex. Length (♂) 7.8–8.0 mm.; width 2.8 mm. Florida (Dunedin),—Blatchley.....**scitus** n. sp.

Form broader and flatter, with shorter prothorax, black, piceous beneath, the tibiæ rufo-piceous, the tarsi paler, rufous; elytra with very faint bluish iridescence; head not at all elongate, with short neck and large, rather prominent eyes, two-thirds as wide as the prothorax; mandibles rufescent, blackish distally, the labrum pale castaneous, the palpi testaceous; antennæ fuscous, paler basally; prothorax fully a third wider than long, the sides evenly and moderately rounded; apex moderately sinuate, with slightly blunt, somewhat projecting angles, distinctly narrower than the base, which is finely margined laterally, with the angles but slightly obtuse and rather narrowly rounded; surface with numerous faint ruguliform transverse lines, the apical incised line fine and faint, wholly obliterated medially; both transverse impressions rather evident; medio-subbasal punctures virtually wanting; foveæ narrow, deep, not attaining the base; latero-basal parts of the surface nearly as in *scitus;* elytra fully one-half longer than wide, about a third wider than the prothorax, rapidly ogival in scarcely apical third, the parallel sides more arcuate basally, the sinus rather short, deep; striæ and punctures throughout nearly as in *comptus*, the intervals rather less convex. Length (♀) 8.0 mm.; width 3.2 mm. Florida (Indian River),—Prof. Kemp.....**contumax** n. sp.

17—Body rather large in size, notably broad, with the upper surface unusually flattened. Oblong, deep black and polished, the tarsi not more than piceous in color; elytra brilliantly iridescent; head small, slightly elongate, with rather long neck, large but moderately prominent eyes, piceous-black mandibles and dark castaneous labrum, scarcely more than half as wide as the prothorax; antennæ fusco-testaceous; prothorax large, a third wider than long, the sides moderately arcuate and sharply but not broadly reflexed, a little straighter basally; apex deeply sinuate, with rather blunt prominent angles and distinctly narrower than the base, which is faintly margined only in lateral fourth, the angles only slightly more than right and not in the least rounded or blunt, though not prominent; apical incised line fine but strong, entire; surface feebly iridescent, rather depressed postero-laterad, though not exactly explanate; impressions vestigial, the subbasal punctures virtually wanting; foveæ two-fifths the total length, not attaining the base, broadly impressed but sharply so along the bottom; elytra three-fifths longer than wide, about a third wider than the prothorax, rapidly rounded in apical third, the parallel sides a little more arcuate basally; sinus moderate but distinct; striæ fine and shallow, extremely finely and indistinctly though closely punctulate, the seventh subsimilar and distinct to the base; intervals almost flat. Length (♀) 11.0 mm.; width 4.2 mm. Mississippi (Vicksburg).....**fulgens** n. sp.

Body smaller, narrower and more convex 18

18—Form ventricose, the hind body very much broader than the prothorax. Black and shining, the legs black, with piceous tarsi; elytra feebly iridescent; surface rather convex; head slightly elongate, with long neck and large, rather prominent eyes, three-fourths as wide as the prothorax; mandibles black, rufous distally except at the extreme apex; labrum very dark, the palpi pale; antennæ piceous, rufous basally; prothorax a fourth wider than long, widest at the middle, the sides subevenly, moderately arcuate to the basal angles, which are minutely and abruptly prominent, not rounded; margins narrowly reflexed, diaphanous posteriorly; apex sinuate, with distinct angles and distinctly narrower than the base, which is margined laterally; apical incised line very fine, obsolete medially; impressions nearly obsolete; medio-subbasal punctures very few, clustered in two groups; foveæ moderate, linear, not attaining the base; elytra less than one-half longer than wide, three-fifths wider than the prothorax, parallel, rapidly obtusely rounded behind, the sides more rounded basally; sinus moderate and short; striæ not very fine, feebly impressed, finely but strongly, closely punctate, the seventh distinct to the base, though gradually finer; intervals moderately convex. Length (♀) 6.7 mm.; width 2.8 mm. Texas (Galveston). A single example taken by the writer.

parvicollis n. sp.

Form more elongate, not ventricose, moderately convex 19

19—Body moderately broad, polished, black; legs obscure rufous, the hind femora alone blackish; elytra rather brilliantly iridescent; head four-sevenths as wide as the prothorax, elongate, with moderate but rather prominent eyes; mandibles obscure rufous, darker distally; palpi pale; antennæ slender, piceo-testaceous, paler basally; prothorax not a fourth wider than long, widest slightly before the middle, the sides finely, diaphanously reflexed, subevenly and moderately rounded, a little less so basally to the angles, which are very minutely subprominent and not rounded, the sides coming upon the base in distinctly more than a right angle; apex deeply sinuate, with rather blunt angles, much narrower than the base, which is finely margined except along the median sinus; apical incised line distinct, entire and obtusely angulate; surface with very feeble ruguliform transverse lines and nearly obsolete impressions; subbasal punctures distinct, sparse, and extending also outwardly along the base; foveæ rather long and deep, far from attaining the base; elytra three-fifths longer than wide, barely a third wider than the prothorax, gradually, then more rapidly, rounded posteriorly, the sides rather arcuate; sinus unusually shallow; striæ rather strong, the punctures very fine and close-set, the seventh stria distinct to the base, though becoming finer; intervals moderately convex. Length (♀) 9.5 mm.; width 3.35 mm. Indiana . . . . **inquietus** n. sp.

Body narrower but otherwise of the same habitus, similar in coloration throughout, except that all the legs, with exception of the tarsi, are piceous-black; hind trochanters and the hind femora, basally, rufous; elytra similarly iridescent; head throughout almost as in *inquietus*

but a trifle narrower; antennæ long, very slender, fusco-testaceous, paler basally; prothorax only just visibly wider than long, widest slightly before the middle, the sides less rounded than in the preceding, gradually less arcuate basally, where the angle is distinctly more than right and not at all rounded, but with its apex not at all prominent; apex as in *inquietus*, except that the angles are blunter and the incised line finer, feebler and subinterrupted at the middle, the surface otherwise as in the preceding, except that the fine median stria is more impressed, the ruguliform lines obsolete and the foveæ less elongate; elytra three-fourths longer than wide, a third wider than the prothorax, gradually rounded behind, the sinus shallow; striæ fine, feebly impressed suturally, the punctures extremely minute, the seventh distinct to the base but feebler than the others; intervals nearly flat. Length (♂) 8.7 mm.; width 2.9 mm. District of Columbia,—Ulke..... **velocipes** n. sp.

20—Legs pale ferruginous throughout; hind thoracic angles obtuse and rounded at tip. Black, the elytra feebly iridescent; head two-thirds as wide as the prothorax, not elongate, the eyes very prominent; labrum and mandibles rufo-castaneous; antennæ fuscous, paler basally; prothorax parallel, a fourth wider than long, the sides evenly, moderately rounded and finely reflexed from apex to base; apex feebly sinuate, with obtuse angles, not distinctly narrower than the base, which is rufescent medially, finely margined laterally; apical incised line distinct and entire; impressions feeble though visible, the stria very fine; subbasal punctures obsolescent; foveæ narrow, deep, far from attaining the base; elytra one-half longer than wide, barely a third wider than the prothorax, gradually rounding behind, more rapidly at apex; sides more rounding basally; striæ not very fine, moderately impressed, distinctly though not coarsely, crenulately punctate, the seventh obsolete basally; intervals moderately convex; subapical sinus very shallow. Length (♀) 6.5 mm.; width 2.35 mm. Indiana..... **vulneratus** n. sp.

Legs dark, the femora black; hind thoracic angles slightly more than right, but not rounded and more or less indistinctly, minutely and bluntly subprominent.....21

21—Body oblong-suboval, rather convex, polished, black, the tarsi rufo-piceous; elytra with moderate iridescence; head nearly two-thirds as wide as the prothorax, with rather long neck and prominent eyes, scarcely elongate; mandibles and labrum very dark; palpi pale; antennæ brownish-testaceous, a little clearer basally; prothorax a fourth to third wider than long, parallel, with evenly and distinctly arcuate and finely reflexed sides, the apex moderately sinuate, with bluntly rounded angles and only slightly narrower than the base, the incised line fine and feeble though entire and unusually close to the apical edge; medio-subbasal punctures few, clustered toward the foveæ, which are moderate, rather deeply impressed; elytra rather more than one-half longer than wide, scarcely a third wider than the prothorax; parallel, rapidly rounding behind, the nearly straight sides more rounding basally, the sinus feeble though evident; striæ

fine, groove-like, very finely, closely punctate, the seventh distinct throughout; intervals only very feebly convex. Length (♂♀) 7.2 mm.; width 2.5–2.6 mm. Florida (Sarasota),—Blatchley.

celer Dej.

Body shorter, more ventricose and rather more convex, polished, black, more piceous beneath, the tarsi dull rufous; elytra moderately iridescent; head slightly elongate, with large and rather prominent eyes, almost three-fourths as wide as the prothorax; antennæ piceous, paler basally; prothorax smaller and narrower than in the preceding, barely a fourth wider than long, the parallel sides very evenly, moderately arcuate and finely, diaphanously reflexed; apex moderately sinuate, with bluntly rounded angles, slightly narrower than the base, which is margined except medially, not rufescent at the middle; incised apical line very fine, obsolete medially; subbasal punctures few; foveæ deep, attaining the base; impressions obsolete; elytra shorter and more oblong-oval, scarcely one-half longer than wide and three-sevenths wider than the prothorax, more regularly rounded behind in apical two-fifths, the sides gradually more arcuate basally; subapical sinus shorter and distinct; reflexed margin rufous; striæ rather fine but more impressed, the punctures much more distinct, minutely crenulating the intervals, which are slightly more convex; seventh stria evident throughout, though merely a series of fine punctures except apically. Length (♀) 7.0 mm.; width 2.4–2.5 mm. Florida (Dunedin),—Blatchley.....**concinnus** n. sp.

The species named *lateralis* above, I received under the name *reflexus* Lec., but there are only five discal striæ on the elytra, the sixth and seventh barely traceable, and, if such a remarkable and wholly exceptional character as this exists in *reflexus*, from Tampa, it surely would have been mentioned by the describer. Again the elytra in *reflexus* are said to be not wider than the prothorax; this is in all probability not rigorously true, as the hind body is always at least somewhat wider than the prothorax in this genus, but the language used seems to show that the difference in width in the case of *reflexus* must be very slight; it is very pronounced in *lateralis*. LeConte, although laying considerable stress upon the partial obliteration of the incised line along the apical thoracic margin in *crenatus* and *tæniatus*, unaccountably makes no allusion to the still more complete obliteration of this line in *saphyrinus;* it is similarly obsolete in *lateralis* and presumably also in *reflexus*, being, in the case of these larger species, to some extent correlated with the basally broadly reflexed sides of the prothorax.

Some of the small species above described, such as *suturalis* and *cervicalis*, are apparently rather closely allied to *velox* Dej., but the

description of the latter states that the prothorax is not at all narrowed anteriorly; the narrowing of the apex is slight though obvious in *suturalis* and very pronounced in *cervicalis*. Other differences would undoubtedly become evident if the type of *velox* were available for comparison, as its habitat is quite different from extreme southern Florida, a large proportion of the species of which are peculiar to that region and, in many cases, more nearly allied to Cuban than to more northern Atlantic species.

The species described under the name *parallelus* seems to be the closest approach to *micans* Chd., from Opelousas, Louisiana, that I have in my collection, but in *micans* the legs are bicolored, the femora being darker than the tibiæ and tarsi, and the surface between the thoracic foveæ and the sides is flat; in *parallelus* it is convex. In *micans* the apical thoracic incised line is said to be wholly interrupted in the middle; it is deep and entire in *parallelus;* the elytra also seem to be more abbreviated and oval in the former. The interrupted incised line in *micans* seems to be similar to that described above in *ludovicianus*, but the latter is a larger species, with uniformly dark rufous legs, and the elytral striæ are very finely and not "fortement" punctured.

I was at first disposed to identify *cursitans* as *floridanus* Lec., but the author states that in the latter species the elytra are iridescent and the striæ feebly and finely punctulate, neither of which characters will fit the more southern *cursitans*. The species *inquietus* and *velocipes*, of the table, are both allied more closely to *erraticus* Dej., than to any other described thus far, but in the latter the sides of the prothorax are said to be slightly sinuate basally and to form an angle with the base which is "tout-a-fait droit." The legs in *inquietus* are differently colored, all the femora being described as blackish-brown in *erraticus*, and in *velocipes* the strial intervals are flatter. Although from an extreme southern latitude, the species above described as *celer* Dej., seems to fit the author's description, especially in the very fine strial punctures; in *concinnus* these punctures are much more conspicuous and the bodily form is quite different.

In *Loxandrus* the mentum tooth constitutes a peculiar exception among the Pterostichinæ, being very thin, flat, diaphanous and trapezoidal, with the apex more or less strongly and evenly rounded.

In *Piesmus* the tooth is nearly similar in outline, but the surface slopes anteriorly, the posterior limit of the slope marked by a prominent line, wholly unobservable in *Loxandrus*. The male in *Loxandrus* has one, the female two, apical setigerous punctures at each side of the last ventral segment.

III—OBSERVATIONS ON THE AMERICAN POGONINÆ, INCLUDING TRECHUS.

The Pogoninæ, as organized by LeConte and Horn, comprise but few genera, but these differ from each other very much in general habitus, as well as special structural characters, and the usual custom now is to restrict the Pogoninæ to *Pogonus* and a few related genera and subgenera, such as *Cardioderus*, *Syrdenus* and *Pogonistes* and to make of *Trechus*, *Anophthalmus*, *Patrobus* and some others a separate subfamily—the Trechinæ; but, as my material will not permit me to go deeply into the subject, I desire at the present time to give synopses of merely the four genera *Patrobus*, *Platidius*, *Trechus* and *Anatrechus*, as now represented in my collection.

Patrobus Steph.

The body in this genus is of moderate to rather small size, somewhat ventricose, with moderate head, prominent eyes and very slender palpi, the last joint of the maxillary always distinctly longer than the third. The prothorax is more or less cordiform, with very deep basal foveæ, which are irregularly rounded and always coarsely punctate and with a short fine carina near the lateral edge basally, the median stria deep, subentire and becoming coarser and deeper at base; the anterior transverse impression is punctate and usually deep, but in some species, such as *lævicеps* and *insularis*, it becomes obsolete medially, leaving only a somewhat evident broad apical beading. The elytra have punctured striæ, the scutellar always long and parallel to the suture, the first stria gradually outwardly oblique at base, ending near the point of origin of the second stria. The subapical sinus is subobsolete, the base not margined, except by a slight incurvature of the lateral margin, and the submarginal line of ocellate punctures is feebly developed. The discal punctures are three in number, but in *rufipes*, LeConte mentions four—possibly however an abnormal condition. The legs and tarsi are slender, the male having the first two joints of the anterior tarsi very moderately dilated. The sterna are all coarsely punctured as

a rule, except medially. Excepting *longicornis* Say, the species occur only in very cold climates; those before me are in great part undescribed hitherto and may be known as follows:

Frontal sulci long and deep, coarsely impressed 2
Frontal sulci very short and feeble, almost obsolete 4
2—Anterior transverse impression of the pronotum coarse, deep, groove-like and impunctate. Body larger, broader and more convex, polished; head three-fourths as wide as the prothorax, with very prominent eyes; last palpal joint two-fifths longer than the third; basal constriction scarcely punctate; prothorax nearly one-half wider than long, cordate, the sides evenly and moderately reflexed throughout the length, sinuate basally, the basal angles not rounded, the apical rather broadly; stria deep, coarsely sulciform at base; foveæ large, deep and cavernous, the carina feeble; elytra widest slightly behind the middle, the striæ coarse, very deep and strongly punctate, rapidly obsolete laterally; under surface piceous, the legs notably pale flavo-testaceous. Length (♂ ♀) 11.0–13.5 mm.; width 3.9–4.8 mm. Rhode Island to North Carolina (Asheville) and northward to Duluth. Abundant. [*Feronia longicornis* Say; *P. americanus* Dej.]
longicornis Say
Anterior impression coarsely and diffusedly punctate; body much smaller and narrower, the elytral striæ finer and less impressed, the legs darker 3
3—Color black, the elytra obscure rufous, darker basally; under surface rufous, blackish anteriorly, the legs dark rufous, the femora sometimes darker; elytra less shining in the female; head four-fifths as wide as the prothorax, with very prominent eyes and small rounded mandibles; basal constriction diffusedly punctate; antennæ dark rufous, sometimes piceous basally, rather long and slender, fully half as long as the body in the male; prothorax a third (♂) to one-half (♀) wider than long, widest two-fifths from the apex, the sides rounded, becoming strongly sinuate, then parallel, basally, the angles sharp but not prominent, the margins well reflexed, more narrowly toward apex; anterior impression shallow but with numerous coarse diffused punctures, the stria coarsely sulciform at base; foveæ deep, coarsely punctate, bistriate, the carina sharply marked; elytra oblong-suboval, widest behind the middle, two-thirds longer than wide and nearly one-half wider than the prothorax; apex gradually rounded; sides but just visibly arcuate, rapidly rounding for a short distance at the humeri; striæ rather fine, but slightly impressed suturally and distinctly punctured except apically, where they become gradually very fine, the seventh fine but distinct, the eighth moderately coarse; third interval with three punctures. Length (♂ ♀) 9.5–10.5 mm.; width 2.8–3.3 mm. Labrador (W. St. Modest),—Sherman. Two examples . . . . . **labradorinus** n. sp.
Color black, slightly rufescent posteriorly beneath, the legs dark rufous; body smaller and narrower than in the preceding, the head similar but with smaller and scarcely so prominent eyes and with the man-

dibles more expanded beneath basally; antennæ slightly shorter and thicker; prothorax narrower, less than a third wider than long, the sides less strongly rounded anteriorly and rather less sinuate basally, more broadly and equally reflexed throughout the length, otherwise nearly as in *labradorinus*, the median stria similarly coarsely sulciform basally; elytra not quite so elongate, otherwise nearly as in the preceding, though not so noticeably swollen behind the middle and with the striæ much less evanescent posteriorly, being subequal in strength throughout the length; met-episterna more finely and feebly punctate. Length (♂) 8.6 mm.; width 2.6 mm. Labrador (W. St. Modest),—Sherman..... **minuens** n. sp.

Color black, the elytra piceous and scarcely so shining in the female, piceo-rufous beneath, the legs obscure rufous; head well developed, with large and very prominent eyes, the basal constriction narrow and deep; mandibles small; antennæ rather long and slender, black; prothorax a third to nearly half wider than long, the sides evenly rounded, sinuate basally, parallel in basal fourth, the angles sharp, sometimes slightly prominent; margin deeply and subevenly but not broadly reflexed; anterior impression rather deep, very coarsely, diffusedly punctate; median stria deep but, unlike the two preceding, only slightly coarser or deeper basally; foveæ large, deep, coarsely punctate, obscurely bistriate, the carina moderate; elytra two-thirds to three-fourths longer than wide, about one-half wider than the prothorax and not obviously swollen behind the middle, gradually evenly rounded behind; striæ distinctly impressed suturally (♂), less so (♀), distinct though finer to the apex, the punctures strong, less so in the female, the seventh stria very fine in both sexes; third interval with the usual three punctures. Length (♂♀) 8.8–9.6 mm.; width 2.9–3.2 mm. Michigan (Marquette),—Sherman. [*Pterostichus tenuis* Lec.]..... **tenuis** Lec.

4—Form subparallel, black, the under surface rufous, darker anteriorly, the legs rufous; head fully three-fourths as wide as the prothorax, the eyes moderately large and prominent; basal constriction coarse, entire, punctate; mandibles small, rounded externally; epistoma transversely tumescent at the middle; antennæ rufo-piceous, half as long as the body; prothorax rather large, two-fifths wider than long, the sides evenly rounded, sinuate posteriorly, becoming parallel in about basal fifth or sixth, finely, subevenly reflexed throughout the length; basal angles right, slightly blunt at tip; base and apex equal in width; anterior impression wholly obsolete, with a few scattered punctures, the apical beading feeble; median stria but slightly coarser and deeper basally; foveæ only moderately deep, punctate, the carina fine and feeble; elytra three-fourths longer than wide, only a fourth wider than the prothorax, not distinctly inflated posteriorly, very gradually rounding at the sides posteriorly; sides less abruptly rounded at the humeri than in the preceding species; striæ very feeble, finely, indistinctly and irregularly punctulate, the seventh almost obsolete, all but the first and eighth obsolete at tip; intervals nearly flat, the third remotely tripunctate; prosternum alone very

coarsely punctate. Length (♂) 8.5 mm.; width 2.8 mm. Labrador (W. St. Modest),—Sherman.....**læviceps** n. sp.

Form rather slender, not quite so parallel, shining, rufous, the head and prothorax somewhat darker; legs rufous; head three-fourths as wide as the prothorax, with rather large and moderately prominent eyes; nuchal constriction deep, punctate; anterior sulci very short, feeble and irregular; epistoma with a transverse ridge, feebler and straighter than in the preceding; antennæ much shorter and thicker, rufous, much less than half as long as the body; prothorax a fourth to two-fifths wider than long, the sides broadly, evenly rounded and finely reflexed, becoming parallel in basal fifth or sixth, the angles right and sharp; anterior impression obsolete, with a very few punctures, the apical beading subobsolete medially; median stria only a little coarser but very deep basally; foveæ smaller than usual, rather deep, punctate and distinctly binary, the carina distinct, very close to the edge; elytra three-fourths longer to nearly twice as long as wide, two-fifths wider than the prothorax, very gradually arcuately narrowing behind; striæ fine, slightly impressed suturally, the discal obsolete at apex; punctures very fine and slightly uneven, close-set; outer striæ very feeble; third interval remotely tripunctate. Length (♂♀) 8.0–9.0 mm.; width 2.7–3.0 mm. Alaska (St. Paul Island). A large series.....**insularis** n. sp.

The species *labradorinus*, *minuens* and *tenuis* have been united with *septentrionis* Dej., in our collections and lists, but they are apparently not the same; *septentrionis* has been traced from northern Europe to Kamchatka, but probably does not cross the Rocky Mountain divide, the species of eastern North America being almost invariably distinct from the Pacific species—even in comparatively northern latitudes. The multiplicity of species, as shown above, they sometimes being abundantly distinct among themselves, as in the case of *tenuis* and *labradorinus*, tends to prove that all are distinct from *septentrionis*. *Septentrionis* is usually compared with *excavatus* Payk. (*rufipes* Duft.) and was for a long time considered identical, but a specimen of the latter now before me, differs much from the three species mentioned, in its more abbreviated form, evident subapical sinus of the elytra and in having the median stria of the pronotum but little coarser basally, differing in this way from *labradorinus* and *minuens* but resembling *tenuis*; this, however, has a larger head, with very much larger and more prominent eyes. *Rufipes* Lec., may or may not be still another species; I have not been able to view the type, which seems to be larger in size than any of the above—10 mm., according to the record. *Insularis* may be allied to *fulvus* Mann., from Kodiak Island, but there is nothing to

indicate this in the description, from which it may be inferred that the frontal sulci are normally long and deep in *fulvus*, which is besides an evidently larger species—10 mm. in length.

Platidius Chd.

The uniting of this genus—which seems to be wholly peculiar to the western parts of North America—with *Patrobus*, is inexplicable. Typically it bears no close resemblance to *Patrobus*, differing in the more parallel and subdepressed form of the body, thicker palpi and more developed mandibles, absence of deep pronotal foveæ and in the acutely pointed hind trochanters, which sometimes attain almost the length of the femora in the males; it differs also in the impunctate sterna. As a remarkable peculiarity, it should be stated that a minute nick in the sides of the prothorax just before the basal angles is usually evident and, in *incisus*, this becomes a rather conspicuous character; it seems to be wholly wanting in *Patrobus*, where the hind trochanters are short and obtuse in both sexes. In *Platidius* the eyes are relatively smaller and much less prominent than in *Patrobus*, and the feebly impressed latero-basal part of the pronotum is very finely punctulate or rugulose, contrasting greatly with the coarse punctures of *Patrobus*. Our species are moderately numerous and, so far as known to me, may be described as follows:

Prothorax nearly as long as wide, subquadrate; size larger as a rule; hind wings well developed 2

Prothorax shorter, transverse and subcordiform; pronotum more sharply punctulate and with the punctures extending from side to side basally; hind trochanters shorter though acutely pointed 7

2—Latero-basal part of the pronotum broadly, very feebly and subevenly impressed and punctulato-rugulose 3

Latero-basal part similarly sculptured, but with a more definite shallow foveiform impression remote from the side margin, the carina less obsolete than in the preceding section 5

3—Mandibles smaller, less prominent. Body relatively broader than in the two following, rather dullish, deep black, the legs black; head large, elongate, nearly four-fifths as wide as the prothorax, the sulci long, deep, extending to the middle of the epistoma; eyes moderate, not very prominent; antennæ black, extending well behind the thoracic base and rather thick; prothorax just visibly wider than long, widest just before the middle, where the sides are rounded, thence feebly converging anteriad and arcuately feebly converging posteriad, becoming very feebly sinuate, the edge sometimes feebly crenulate, feebly and narrowly reflexed, rapidly more broadly so near the rounded apical angles; base as wide as the sinuato-truncate apex,

very oblique at each side, the angles right and sharp, the nick distinct; impressions very feeble and diffuse, the posterior feebly punctulate medially; median stria deep, biabbreviated, not deeper behind; elytra three-fifths longer than wide, parallel and with nearly straight sides, rounding basally, the margin incurvate at base for a short distance, nearly one-half wider than the prothorax, somewhat obtuse at tip, the sinus very feeble; surface subdeplanate laterally at apex, as usual in the genus; striæ fine, feebly impressed, not definitely punctate, the outer feeble, the ninth midway between the eighth and margin; third tripunctate, the scutellar long as usual; intervals very feebly convex. Male with the anterior tarsi rather stouter and more convex than usual in the genus, the hind trochanters acicularly narrowed and prolonged in apical half and almost as long as the tibiæ, two-fifths as long as the latter and simply pointed in the female. Length (♂♀) 10.5–13.2 mm.; width 4.0–4.7 mm. California (Mendocino and Humboldt Cos.). Six specimens.

latipennis n. sp.

Mandibles notably longer and more prominent in both sexes 4

4—Body smaller and more slender than in *latipennis*, similar in color and in the rather dullish lustre; male more notably smaller than the female; head slightly narrower than the prothorax, the eyes more prominent than usual in the genus; sulci long, very broad and deep, slightly converging; antennæ rather long, not so thick as in *latipennis;* prothorax nearly similar throughout but smaller, with the sides usually more distinctly sinuate basally; vestiges of a fine carina more evident; elytra narrower though of nearly similar outline, structure and striation, fully two-thirds longer than wide and nearly one-half wider than the prothorax. Male with the anterior tarsi rather less stout, the hind trochanters three-fourths as long as the tibiæ, gradually finely aciculate in less than apical half. Length (♂♀) 10.0–12.0 mm.; width 3.7–4.0 mm. California (Sonoma and Mendocino Cos.). [*Patr. trochantericus* Lec.] . . . . . **californicus** Mots.

Body nearly as in *californicus* but much larger, more elongate and larger than in *latipennis*, similar in coloration and lustre; head and prothorax larger than in the preceding, the former with less prominent eyes and less constricted and much broader neck; antennæ long, more pallescent distally, the sulci similar; prothorax slightly though evidently wider than long, as in the two preceding in general form and structure, the short carina near the hind angles very feeble and vestigial; minute nick before the hind angles distinct; elytra notably elongate, fully three-fourths longer than wide, less than one-half wider than the prothorax, similar to the two preceding in general outline, striation and structure, the three punctures on the third stria more broadly impressed, equidistant and widely separated as usual; hind trochanters of the male gradually finely aciculate and more or less contorted distally and almost as long as the tibiæ; in the female they are gradually sharply pointed and half as long as the tibiæ; anterior tarsi of the male notably stout basally. Length (♂♀) 13.0–15.0 mm.; width 4.4–4.8 mm. California (south of San Francisco),—Dunn . . . . . **incisus** n. sp.

5—Mandibles long and prominent in both sexes. Body larger than in any other species, rather stout, subparallel, deep black, more shining than usual; head large and elongate, only very slightly contracted at base, the eyes scarcely more prominent than the tumid sides behind them; sulci very coarse; epistoma tumid in anterior half; antennæ black, not very thick, extending behind the thoracic base; prothorax large, only slightly wider than long, widest at the middle, the sides feebly converging thence anteriad, feebly oblique but not sinuate toward the hind angles, feebly reflexed, the edge finely and abruptly erect and, toward the rounded, anteriorly produced and lobiform apical angles, becoming conspicuously and broadly reflexed; base sinuously very oblique at the sides, the angles scarcely more than right, the nick distinct though shallow; transverse impressions distinct but diffuse, the rather fine deep and even stria biabbreviated; inner fovea very large, shallow and diffuse, the outer narrow and short but more sharply defined; elytra oblong, parallel, two-thirds longer than wide, scarcely a third wider than the prothorax, subcircularly rounded at tip; striæ not very fine and distinctly impressed, the outer less so though distinct and feebly punctate; intervals convex; anterior tarsi (♂) only slightly dilated, the tibia broadly arcuate, the inner tooth near apex distinct; hind trochanters gradually aciculate, three-fourths as long as the tibiæ, the tibia feebly sigmoid. Length (♂) 14.5–15.5 mm.; width 5.2–5.4 mm. Washington State. Two examples..... **strenuus** n. sp.

Mandibles rather short, more rounded externally.....6

6—Form parallel, slightly convex, deep black, more polished than usual; head fully two-thirds as wide as the prothorax, subquadrate, the neck almost as wide as the distance across the eyes, which are not prominent; sulci long, very broad and deep, parallel; epistoma nearly flat, with a feeble foveiform impression at base; antennæ black, rather stout, extending but slightly behind the thoracic base; prothorax large, barely at all wider than long, equally wide at base and apex as usual in this genus, widest at the middle, the sides very feebly arcuate, nearly straight, subparallel and feebly crenulate anteriad, barely at all converging and just visibly sinuate posteriad; base oblique at the sides, the angles slightly blunt, the nick distinct; sides feebly reflexed, the lobiform apical angles rounded and broadly deplanato-reflexed; apex subtruncate; impressions feeble but evident, the stria biabbreviated; inner fovea large, shallow and finely scabrous, the outer a fine sharp impressed line, not delimiting a carina; elytra parallel, with straight sides which rapidly round at base, three-fourths longer than wide, not a third wider than the prothorax; striæ rather feebly impressed, not fine and very minutely punctulate; intervals nearly flat. Male with the anterior tibiæ broadly arcuate, the femora obtusely dentate beneath at the middle, the tarsi feebly dilated; hind tibiæ strongly sigmoid, with longer and closer coarse hairs within, except basally, the trochanters gradually finely aciculate and subequal in length to the femora. Length (♂) 12.7–14.0 mm.; width 4.6–4.8 mm. Nevada (Reno). Two specimens.

rectus n. sp.

Form less parallel, the anterior parts relatively smaller, body smaller in size, similar in the deep black color, the surface slightly less shining; head not quite so large, though two-thirds as wide as the prothorax, less broad at base, the eyes more convex and distinctly more prominent; sulci very broad and deep, parallel; antennæ nearly similar; prothorax slightly though more evidently wider than long, in general similar to that of *rectus*, though relatively smaller in size and with the apical angles less conspicuously lobed, the sides basally more distinctly sinuate and the inner fovea shallower and less definite, the outer an almost similar short, finely and feebly incised line; elytra similar but narrower, less obtuse at apex and fully two-fifths wider than the prothorax, the striæ finer but more evidently impressed, the outer striæ less obsolete and the punctulation very fine and feeble. Male with the anterior tarsi very moderately inflated, the tibiæ apically more bent, the femora not dentate beneath; posterior tibiæ less sigmoid and with less conspicuous hairs within, the trochanters gradually finely aciculate and four-fifths as long as the femora; in the female they are more rapidly and obtusely pointed and two-fifths as long as the femora. Length (6♂, 8♀) 12.0–13.0 mm.; width 4.1–4.5 mm. California (Mokelumne Hill, Calaveras Co.) and Nevada (Reno)..... **sierranus** n. sp.

Form much more abbreviated and very much smaller in size, similar in color and lustre to the preceding; head nearly four-fifths as wide as the prothorax, with notably convex and prominent eyes, the coarse sulci divided each into two large deep foveæ in the type; antennæ black, rather thicker and distinctly shorter than in either of the preceding, as seen especially in the shorter third joint; nuchal constriction shallow, with minute sparse punctulation; prothorax in nearly all respects as in *sierranus*, except that the inner shallow fovea is more sharply defined and the outer one a deeper and more conspicuous short incised line, and also that the basal margin is slightly beaded toward the sides; elytra similar but very much shorter, not quite one-half longer than wide, one-half wider than the prothorax. Male with the anterior femora very obtusely angulate at the middle beneath, the tibiæ but feebly arcuate distally and the tarsi scarcely at all dilated; posterior tibiæ feebly sigmoid, distinctly pubescent within and with the trochanters rapidly finely aciculate distally and scarcely more than two-thirds as long as the femora. Length (♂) 9.0 mm.; width 3.7 mm. Nevada (Reno). One example.

breviusculus n. sp.

7—Head, exclusive of mandibles, fully as wide as long, the neck very short, the mandibles very small, acute though only feebly inflexed at tip. Body rather narrow, feebly depressed, black in color, the legs black, the trochanters rufous; head three-fourths as wide as the prothorax, the eyes notably prominent, the sulci long, deep, slightly converging, extending beyond the middle of the epistoma; antennæ moderate, rather slender, black; prothorax two-fifths wider than long, widest just before the middle, slightly narrowed thence to the broadly rounded apical angles, oblique and sinuate poste-

riorly, becoming subparallel in about basal fifth; base as wide as the distinctly sinuate apex, only feebly oblique laterally; anterior impression distinct, subangulate, the posterior not distinct, very diffuse; foveæ large, shallow, the outer wanting; side margins broadly reflexed; hind angles sharp, the nick obsolete as usual in this section; elytra three-fourths longer than wide, not quite one-half wider than the prothorax, parallel, the sides gradually rounding behind, without sinus, gradually arcuate basally; striæ moderate, deeper apically, distinctly impressed and obsoletely punctulate suturally, the seventh distinct, the ninth very fine, the space between the eighth and margin much narrower than in the preceding section, the ocellate series entire but fine. Male with the anterior femora angulate beneath behind the middle, the tibiæ straight, the tarsi with the first two joints very feebly dilated; posterior trochanters much less than half the femoral length and acutely pointed; last ventral with a single very small apical puncture far to each side; female with two close-set punctures at each side, the hind trochanters more obtuse, scarcely more than a fourth the femoral length. Length (♂♀) 10.0–10.5 mm.; width 3.5–3.6 mm. The female the smaller. Colorado (Boulder Co.) ..... **breviceps** n. sp.

Head slightly to distinctly longer than wide, the neck less abbreviated; mandibles more prominent and more incurved at tip 8

8—Space between the eighth elytral stria and the margin narrower than the eighth interval as in the preceding; frontal sulci extending at least to the middle of the epistoma; antennæ moderately long and slender; elytra narrower, parallel 9

Space between the eighth stria and the sides as wide as the eighth interval, the elytra broader and more oblong-suboval; frontal sulci extending to but not upon the epistoma; antennæ notably longer and more slender 10

9—Form moderately narrow, subparallel and feebly convex, dark piceous-brown in color, the femora blackish; head nearly three-fourths as wide as the prothorax, the eyes well developed but only moderately prominent; sulci long, coarsely impressed and subparallel; antennæ dark rufous, half as long as the body; prothorax not quite two-fifths wider than long, the sides broadly reflexed, subevenly rounded, becoming subparallel in about basal sixth; base rather wider than the moderately sinuate apex, only slightly oblique laterally, the angles sharply defined, the anterior moderately blunt; impressions distinct, the posterior more obsolete medially in the female; foveæ distinctly impressed, rugulose, the outer evident but feeble, linear; elytra three-fourths to four-fifths longer than wide, a third, or more (♀), wider than the prothorax, the parallel sides rapidly more rounded at the humeri, gradually subcircularly rounded at apex, the sinus wholly wanting; striæ fine but everywhere distinct, not at all less so apically, evidently impressed suturally throughout but barely at all punctulate, the third with the usual three punctures. Male with the anterior femora evenly and feebly arcuate beneath, the tibiæ straight and the tarsi more inflated than in the preceding, though moderately; hind trochanters a third as long as the femora, sharply pointed, the

tibiæ but feebly curved outwardly toward tip and with the inner erect hairs short; hind tarsi very slender and not much shorter than the tibiæ. Length (4♂, 2♀) 9.0–10.3 mm.; width 3.25–3.5 mm. Colorado. Levette collection.....**tenuitarsis** n. sp.

Form elongate, subparallel, rather depressed, shining, deep black, the legs black with rufous trochanters; head elongate, fully two-thirds as wide as the prothorax, the eyes moderate and not very prominent; sulci long and deep; palpi and antennæ black, the latter rather long and slender; prothorax transverse and about one-half wider than long, the sides rounded and well reflexed, sinuate basally and parallel in about basal sixth, the angles more than right but well defined; base feebly oblique laterally, as wide as the distinctly sinuate apex, the apical angles rounded and very obtuse; anterior impression deep and with a few fine punctures, the posterior obsolete; basal punctures numerous and very clearly defined; foveæ shallow, the exterior very short and acutely linear; elytra long, but little less than twice as long as wide, two-fifths wider than the prothorax, gradually ogival apically, without trace of sinus; sides nearly straight, gradually rounding basally; striæ acutely deep and strong throughout, even coarser and deeper at apex, still more impressed suturally, minutely punctulate basally, the seventh entire and rather deep, the eighth not quite attaining the apex; intervals moderately convex. Male with the anterior femora distinctly dentate beneath at basal third, the tibiæ straight, with strong inner subapical tooth, the tarsi only just visibly enlarged basally; hind trochanters slightly less than half the femoral length, sharp, the tarsi slender, black, long though distinctly shorter than the nearly straight tibiæ. Length (♂) 11.0 mm.; width 3.8 mm. Colorado (Red Cliff),—Wickham. **coloradensis** n. sp.

Form nearly as in the preceding, black, the legs black or piceous, shining, the elytra dullish in the female as usual; head slightly elongate, with moderately prominent eyes and long deep sulci; antennæ rufo-piceous, moderately long and slender; prothorax less transverse and less rounded at the sides than in the preceding, a third wider than long; sides broadly and strongly reflexed, feebly oblique and sinuate basally, becoming not quite parallel toward the very sharp and subprominent angles; base oblique at the sides; apex sinuate, with rounded angles; impressions and biabbreviated stria nearly as in the preceding; inner fovea deep, sublinear, broadly impressed, the outer very short, feebly defined; elytra three-fourths longer than wide, not quite one-half wider than the prothorax, very feebly inflated posteriorly, gradually ogival apically, the sides gradually rounding basally, the sinus completely wanting; striæ fine, acute but not conspicuous, not punctate, the inner equally distinct and barely impressed to the apex, the outer very fine and feeble, not entire, the eighth abbreviated on the broad latero-apical declivity; intervals nearly flat. Length (♀) 11.0 mm.; width 3.8 mm. Colorado. Levette collection.....**reflexus** n. sp.

10—Body more oblong-suboval in form, feebly convex, deep black and very shining; legs black, the coxæ rufous, the abdomen rufescent

apically; head rather elongate, more than three-fourths as wide as the prothorax, with prominent mandibles, extremely broad deep sulci and rather prominent though moderate eyes; antennæ piceous, very slender, much more than half as long as the body; nuchal constriction very feeble and diffuse, with fine punctures; prothorax two-fifths wider than long, widest at the middle, the sides thence feebly converging and nearly straight to the broadly rounded apical angles, broadly and moderately sinuate basally, becoming very gradually parallel in about basal sixth, the angles right and sharply defined; margins reflexed, deeply so only in apical half; apex feebly sinuate, transverse; impressions both evident but feeble and diffuse, both plentifully and sharply punctulate; stria deep, biabbreviated; foveæ broadly and deeply impressed, sublinear, the outer short, linear, feeble and indefinite; elytra three-fourths longer than wide, one-half wider than the prothorax, gradually ogival in nearly apical half, with long and very feeble sinus; sides very gradually a little more arcuate basally; striæ fine but sharp, finely punctulate, evidently impressed, rather deeply so inwardly, entire, the seventh distinct and impressed, the ninth midway between the eighth and margin; intervals feebly convex. Length (♀) 10.5 mm.; width 4.0 mm. California (Redwood Creek, Humboldt Co.) ..... **filicornis** n. sp.

The elytra in this genus and *Patrobus* are very much as in Pterostichinæ, resembling them especially in the disposition of the ninth stria, but they differ in having no basal margination and in the rather conspicuous declivo-explanate postero-lateral part of the surface, which is feebly traceable also in *Pogonus*. The five last described species of the table are doubtless allied to the Alaskan *aterrimus* Dej., which I have not seen, and they approach the genus *Patrobus* more closely in general outline, and especially in the more cordiform prothorax, than they do the larger parallel forms with greatly developed male hind trochanters; but that they do not strictly form a bond between the two genera, can be shown by the system of sculpture, form of the pronotal foveæ and sexual modifications of the hind trochanters, which are exactly of the same nature as in the larger species, though less developed; also by the feeble nuchal constriction, more flattened upper surface of the body and general habitus.

The first elytral stria is bent outwardly toward base, ending in the ocellate puncture at the base of the second stria; the long scutellar stria lies between the basal part of the first and the scutellum and basal part of the suture, and is not connected in any way with the ocellate puncture, as is usual with the scutellar stria. I have noticed this same peculiarity in *Trechus*. In *Anophthalmus* there

is no scutellar stria, the first ending at base in a large dilatation, which includes the minute elevated subscutellar tubercle—not a puncture in this case or in *Trechus*. This unusual disposition of the basal part of the first stria and the scutellar stria, is very different from that characterizing the Pterostichinæ, where the scutellar stria lies between the first and second striæ and proceeds directly from the ocellate puncture, but I have noted in some Evarthrids, as an abnormal feature, that the first stria may be deflected at base, becoming coincident with the scutellar stria and ending in the puncture, the true base of the first stria being disconnected and free. By evolution this detached basal part of the first stria, has become the regular scutellar stria in the Pogonid genera, the first regular stria being always and normally deflected outwardly at base to the ocellate puncture.

Trechus Clairv.

This genus of comparatively minute species—when compared with the preceding genera, together with *Anophthalmus*, differs very greatly from the preceding types in having the hind body narrowly pedunculate and in having the fourth palpal joint slender, aciculate and frequently longer than the third, though in *Anatrechus*, defined below, the maxillary palpi are much thicker than in *Trechus*, approaching the structure seen in *Patrobus*. In *Trechus* the frontal sulci are usually more prolonged and outwardly curvate posteriorly than in *Patrobus*. The elytra are nearly similar in general structure, except that there is at apex a coarse deep arcuate prolongation of the fine fifth stria, which is absent in *Patrobus* and related genera. The legs and trochanters are unmodified as in *Patrobus*, but the general structure of the under surface is similar. There is a single puncture at each side of the abdominal tip in both sexes and the posterior of the three dorsal punctures of the elytra is very near the apex.

Trechus and *Anophthalmus* are both enormously developed in the European fauna, but they are comparatively poor in species and rare in individuals in North America. Our very moderate number of *Trechus* species may be known as follows:

Outline more nearly parallel, the hind body oblong-suboval 2
Outline strongly ventricose, the hind body more inflated and ovulate . . 8
2—Eyes rather large and prominent. Pacific coast fauna 3

Eyes moderate to small, less prominent. Atlantic coast fauna.....5

3—Color rufo-piceous, the prothorax paler and more testaceous. Under surface obscure rufous, the legs paler; antennæ long and filiform, piceous; head shorter than wide, three-fourths as wide as the prothorax, the sulci subinterrupted; fourth palpal joint scarcely as long as the third; prothorax short and transverse, fully two-thirds wider than long, subevenly rounded at the sides, the latter finely reflexed, more so near the basal angles as usual, the angles more than right, sharp, minutely subprominent at tip; base evidently wider than the feebly sinuate apex; impressions distinct, the anterior near the margin; stria not coarse but deeply impressed, abbreviated in front; foveæ deep, remote from the sides; elytra one-half longer than wide, a third wider than the prothorax (♂), slightly more (♀), subevenly rounded behind from a little beyond the middle; striæ rather fine, only feebly impressed and with small punctures internally, gradually becoming obsolete externally. Length (♂♀) 3.7–4.2 mm.; width 1.35–1.6 mm. British Columbia (Stickine River),—Wickham. Sitka,—Motschulsky. An ample series. . .**californicus** Mots.

Color black to piceous-black, the prothorax not or scarcely at all paler than the elytra, the latter faintly opalescent; legs rufous; body much stouter in form.....4

4—Body stout, moderately convex; head two-thirds to three-fourths as wide as the prothorax, not quite as long as wide, the sulci very long, entire; last palpal joint somewhat longer than the third; antennæ slender, rather long, piceous, paler at base; prothorax much less transverse than in the preceding, one-half wider than long, the sides and angles subsimilar; base scarcely at all wider than the apex; impressions and foveæ nearly similar; elytra oblong-suboval, not quite one-half longer than wide, two-fifths wider than the prothorax, the arcuate sides moderately reflexed; striæ finely punctate, rather fine, feebly impressed internally, gradually obsolescent externally; dorsal punctures coarse and conspicuous. Length (♂♀) 4.3–4.7 mm.; width 1.45–1.75 mm. California (Siskiyou Co.) and Vancouver Island. Unalaska Island,—Dejean.....**chalybeus** Dej.

Body distinctly more abbreviated and broader, deep black above, piceous beneath, the legs bright rufous; head three-fourths as wide as the prothorax, about as long as wide, the sulci subinterrupted; palpi and antennæ bright rufo-testaceous throughout, in structure somewhat as in *chalybeus;* prothorax broader, nearly two-thirds wider than long, the sides subsimilarly rounded and basally feebly oblique and straighter, the apices of the basal angles minutely prominent; impressions and foveæ nearly similar; base much broader than the moderately sinuate apex; elytra notably shorter and broader, with much more rapidly and broadly obtuse apex, parallel, with feebly arcuate sides, a third longer than wide, two-fifths wider than the prothorax; striæ moderate, distinctly though not coarsely punctured, evident throughout the width, gradually more impressed, though not very deeply, toward the suture; three dorsal punctures not so coarse as in *chalybeus;* opalescent lustre scarcely evident. Length

(♀) 4.35 mm.; width 1.7 mm. California (Lake Tahoe). Two examples. . . . . **tahoensis** n. sp.

5—Color testaceous, the head and prothorax more or less infumate; sides of the prothorax more strongly arcuate anteriorly and oblique and straighter for a greater distance thence to the base. Form rather convex, moderately stout, polished; head three-fourths as wide as the prothorax, the eyes slightly more developed and prominent than in the following three species, the sulci long, entire; fourth palpal joint slightly longer than the third; antennæ rufous, as long as the elytra and slightly thickened distally; prothorax not quite one-half wider than long, widest near apical third, the basal angles minutely and feebly subprominent; anterior impression deep, subangulate, the posterior feeble; stria deeply impressed; foveæ deep, at lateral fourth; elytra slightly less than one-half longer than wide, a third wider than the prothorax, nearly one-half (♀), obtusely rounded at apex; striæ inwardly coarse, deep and strongly punctured, feeble though traceable laterally, the dorsal punctures coarse; intervals strongly convex suturally. Length (♂♀) 3.7–4.0 mm.; width 1.5–1.6 mm. Minnesota (Duluth) and Wisconsin (Bayfield). [*Trechus fulvus* Lec. (*Epaphius* Lch.)—nom. præocc.]. Eight examples, demonstrating the constancy of coloration. . . . . **pallescens** nom. nov.

Color black or piceous-black, the elytra feebly opalescent, the anterior parts not or scarcely paler; sides of the prothorax more evenly arcuate, oblique and nearly straight in about basal half; legs rufous. . . 6

6—Elytra more elongate, fully two-thirds longer than wide; antennæ notably longer, fully as long as the elytra, very slender, evenly filiform and rufous. Body notably elongate; head two-thirds as wide as the prothorax, the long sulci wholly interrupted medially in the type; eyes moderate, not very prominent; prothorax slightly more than one-half wider than long, the basal angles well reflexed, obtuse, not rounded but not at all prominent at tip; anterior impression fine, linear, the posterior evident; foveæ small, deep, just beyond lateral fourth; elytra two-fifths wider than the prothorax, gradually rounding behind, parallel, with arcuate sides and rather rapidly, evenly rounded humeri; striæ inwardly moderate, rather impressed and not coarsely but strongly punctate, gradually obsolete laterally; intervals evidently convex suturally; dorsal punctures distinct but not coarse, adjoining the third stria as usual. Length (♂) 4.4 mm.; width 1.5 mm. Massachusetts (Fall River),—Frost. **puritanus** n. sp.

Elytra less elongate, barely one-half longer than wide; antennæ much shorter, not as long as the elytra in either sex 7

7—Form moderately stout and convex, shining, blackish-piceous; head nearly three-fourths as wide as the prothorax, somewhat longer than wide, the eyes notably small, slightly prominent; sulci subinterrupted; antennæ very slender, fusco-rufous, slightly compressed distally; prothorax relatively smaller than in the preceding, one-half wider than long to slightly less, the basal angles obtuse, with the tip barely visibly subprominent; base slightly wider than the apex (♂), subequal in the smaller prothorax of the female; anterior im-

pression notably feeble, the posterior more distinct, the stria rather deep, subentire; foveæ small and narrow, deep, at lateral fourth; elytra two-fifths (♂) to one-half (♀) wider than the prothorax, parallel, with evenly arcuate sides, subcircularly rounded at apex; striæ moderately coarse, impressed and distinctly punctate inwardly, becoming feeble though easily traceable laterally; dorsal punctures notably coarse. Length (♂ ♀) 3.8–4.0 mm.; width 1.35–1.45 mm. Rhode Island (Boston Neck).....**rhodensis** n. sp.

Form nearly as in the preceding but with distinctly smaller prothorax, the eyes not so small and rather more prominent; head nearly three-fourths as wide as the prothorax, somewhat elongate, rufescent at base and apex, the sulci subinterrupted; antennæ dark rufous, a little longer and thicker than in *rhodensis* and more evidently incrassulate distally, less evidently shorter than the elytra; prothorax one-half wider than long, the basal angles obtuse, sharp but not prominent; anterior impression subobsolete, the posterior distinct; foveæ much larger, relatively shallower and less definitely limited than in the preceding species; elytra not quite one-half longer than wide, almost one-half wider than the prothorax, feebly inflated posteriorly, circularly rounded behind; striæ as in *rhodensis*, the dorsal punctures coarse. Length (♂) 4.2 mm.; width 1.48 mm. Labrador (W. St. Modest),—Sherman.....**brumalis** n. sp.

8—Elytra each with the normal three discal punctures.....9

Elytra each with but two discal punctures, the median constantly wanting.....14

9—Elytra more nearly of the form prevailing in the preceding group, being oblong-oval. Body piceous-black, moderately convex, shining, the legs rufous; head not longer than wide, fully four-fifths as wide as the prothorax, the eyes moderately large but only slightly prominent; sulci coarse and deep, entire; last palpal joint not as long as the third; antennæ filiform though not very slender, piceous, rufescent basally, distinctly shorter than the elytra; neck rufescent; prothorax two-fifths wider than long, the base and apex subequal in width; basal angles reflexed, obtuse, the tips not prominent; anterior and posterior impressions both distinct, the stria subentire; foveæ deep, slightly outside of lateral fourth; elytra one-half longer than wide, one-half to two-thirds wider than the prothorax, rather obtusely but evenly, subcircularly rounded at apex, the sides somewhat strongly, evenly arcuate; striæ moderate, not clearly punctate, feebly impressed inwardly, gradually obsolete laterally, the dorsal punctures very moderate in size. Length (♂ ♀) 4.4–4.6 mm.; width 1.7–1.75 mm. Colorado. Levette collection.....**saxatilis** n. sp.

Elytra more subglobose, less elongate and more convex, the striation much less developed.....10

10—Elytra with the medial puncture slightly behind the middle of the length as usual, the striæ very fine but rather sharply impressed suturally.....11

Elytra with the medial puncture before the middle of the length, the striæ usually indefinite, very fine when visible.....13

11—Antennæ notably long, very slender and filiform, fully as long as

the elytra or a little longer. Body extremely ventricose, blackish-piceous with rufous legs, polished; head unusually narrow and elongate, two-thirds as wide as the prothorax, the eyes notably small and scarcely at all prominent; sulci long, deep and entire; antennæ obscure rufous; prothorax relatively very small, a third wider than long, the evenly rounded and well reflexed sides becoming slightly sinuate before the acute, sharp and notably prominent basal angles; base and apex equal in width; anterior impression very fine and linear, the posterior feeble, the foveæ deep, sublinear, at outer fourth; elytra scarcely a third longer than wide, twice as wide as the prothorax, evenly elliptic-oval and very convex; striæ very fine, scarcely at all impressed, not clearly punctulate, gradually almost obsolete laterally; dorsal punctures somewhat coarse; sutural stria gradually coarser and deeper apically. Length (♂) 4.4 mm.; width 2.0 mm. North Carolina (summit of Black Mts.),—Beutenmüller.

carolina Schf.

Antennæ not as long as the elytra; hind body much less dilated and not quite so convex; head less narrow and not elongate, the eyes more developed 12

12—Form rather stout, shining, dark rufous, the elytra more clouded; legs rufous; head fully three-fourths as wide as the prothorax, the eyes slightly prominent, moderate in size, the sulci long, deep, entire and strongly arcuate; last palpal joint shorter than the preceding; antennæ filiform though not very slender, obscure rufous, but little shorter than the elytra; prothorax nearly one-half wider than long, somewhat wider at base than at apex, the rounded and well reflexed sides becoming briefly but deeply sinuate at the hind angles, which are scarcely more reflexed but acute, very sharp and laterally prominent; anterior impression feeble, the posterior coarser and deeper, both subangular; stria very fine, coarser basally; foveæ rather large, deep though diffuse; elytra two-fifths longer than wide, two-thirds wider than the prothorax, broadly rounded posteriorly, the humeri and sides almost coarcuately rounded; striæ internally rather fine, evidently impressed and finely, obscurely punctulate, gradually obsolescent laterally, the second as well as fifth with an arcuate apical groove; scutellar stria rather long and deep; dorsal punctures moderate. Length (♂) 3.8 mm.; width 1.65 mm. Arizona (locality unrecorded) . . . . . **arizonæ** n. sp.

Form nearly similar but smoother, more convex and very much smaller in size—the smallest of the known American species; color piceous-black, the legs rufous; head moderate, two-thirds as wide as the prothorax, fully as long as wide, the eyes small, scarcely prominent; sulci deep, entire; last palpal joint very slender, much shorter and narrower than the third; antennæ short, filiform, piceo-rufous, clearer basally, scarcely four-fifths as long as the elytra, the joints unusually short; prothorax short, three-fifths wider than long, the rounded sides oblique and straighter posteriad, very feebly sinuate at the hind angles, which are right, not very sharp and not prominent; anterior impression fine, feeble, linear, the posterior coarse and deep; foveæ small, deep, slightly beyond lateral fourth; elytra more oblong-

oval, more obtuse at base and apex, the humeri more rounded than the sides, two-fifths longer than wide and one-half wider than the prothorax; striæ very fine and feeble even suturally and not evidently punctulate, broadly obsolescent laterally, with the scutellar stria extremely short; dorsal punctures rather small. Length (♂) 2.8–3.0 mm.; width 1.2–1.3 mm. North Carolina (Black Mts.),—Beutenmüller. Three examples..... **hydropicus** Horn

13—Body rather stout and convex, female the less; integument shining, dark rufous, the elytra more or less clouded; head more than three-fourths as wide as the prothorax, with moderate eyes and long deep entire sulci; last palpal joint shorter than the fourth; antennæ slender, infuscate, clearer basally, not quite as long as the elytra; prothorax small, about one-half wider than long, the sides strongly, subevenly reflexed, arcuate anteriorly, oblique and straighter posteriad, very faintly sinuate near the angles, which are nearly right and not at all prominent, though not rounded; anterior impression subobsolete, the posterior feeble; foveæ small, deep, sublinear, at outer fourth; elytra oval, more obtuse than circular at apex, the humeri rather more rounded than the sides, nearly three-fourths wider than the prothorax; striæ extremely fine and faint, sometimes obliterated as sharply marked lines, wholly obsolete externally, not punctate, the scutellar moderate, the two anterior dorsal punctures moderately strong, more approximate than usual in this genus. Length (♂♀) 3.6–4.1 mm.; width 1.5–1.75 mm. California (Sta. Cruz to Humboldt Co.). Nine specimens. [*T. lævigatus* Lec.—catalogue name.]..... **ovipennis** Mots.

14—Form narrower than in *ovipennis* but otherwise very similar, testaceous in color and shining; head somewhat longer than wide, scarcely three-fourths as wide as the prothorax, with rather large and moderately prominent eyes and deep entire sulci, which are not much curved outwardly behind; fourth palpal joint longer than the third; antennæ pale, about as long as the elytra in the male, or evidently shorter (♀); prothorax nearly as in *ovipennis*, but with broader and more irregularly impressed foveæ, the basal angles similar; elytra very nearly one-half longer than wide, oval, barely two-thirds wider than the prothorax, less obtusely rounded at tip than in *ovipennis;* sides but little more rounding toward the humeri; striæ fine, very faint and vestigial, the sutural rather more visible, the scutellar moderate, fine. Length (♂♀) 3.4–3.8 mm.; width 1.35–1.55 mm. California (Pasadena). Four examples..... **pomonæ** Fall

I am at a loss to know which of our species could have been identified as the European *rubens* Fab., and am inclined to believe that the latter is not established here, though possibly occurring occasionally through fortuitous importation. The species above described as *puritanus* answers best to *rubens* in its notably elongate elytra, but it is black and has unusually long antennæ; as *brumalis* and *rhodensis* are allied black or blackish species, though distinctly dif-

ferent in elytral and antennal structure, it becomes highly probable that no one of the three can be *rubens*. *Micans* of LeConte, from Lake Superior, I have not seen; it probably belongs in the same section as the three just mentioned, but the expressions in regard to the prothorax "utrinque ante medium foveolatus" and to the elytra "maculis utrinque duabus magnis obscuris valde obsoletis" are not applicable to any of them; the former of these expressions is possibly either a mistake or refers to some abnormal condition in the type specimen.

There can be no doubt that *californicus* is distinct from *chalybeus;* it is a smaller and narrower species, as shown by the ample series at hand, besides differing in color as stated by Motschulsky. The species described by LeConte under the preoccupied name *fulvus* is also amply isolated. *Carolina* is the most remarkable of our species in its extremely inflated and convex hind body, narrow head, small eyes, very long filiform antennæ and sharply prominent hind thoracic angles, in which last character it is however approached by *arizonæ*.

Anatrechus n. gen.

This remarkable genus is founded upon *Trechus barbaræ* of Horn. It differs from *Trechus* in the much larger head, stouter palpi, the last joint being much longer than the third and conoidal, in the obsolete frontal sulci, basally much narrowed prothorax, with the sides of the base very oblique, recalling *Platidius*, and in the obsolete basal foveæ, absence of elytral striation and of the subscutellar puncture or tubercle; also in the lack of any trace of the peculiar arcuate apical fossa in prolongation of the fifth stria distinguishing *Trechus;* it further differs by the presence, along the median line of each elytron, of several coarse setigerous punctures, disposed apparently in two approximate series. On the under surface it differs greatly in the small and very short met-episterna and relatively longer abdomen and the male, instead of having the first two joints of the anterior tarsi strongly dilated, has these tarsi thicker, the first two joints more transverse and less conspicuously dilated when compared with the two following joints. The eyes are well developed and rather prominent, the mentum tooth acutely bidentate and the hind tarsi thick, the basal joint as long as the

next three combined, the latter subequal among themselves and about as long as wide. Hind wings are almost certainly wanting.

The male example in my collection was received from Mrs. Fuchs, and is in all probability the same as that described and figured by Mr. Schaeffer (Bull. Am. Mus., N. Y., XIV, p. 210). Its dimensions are 5.0 by 1.8 mm. It was labeled "Pasadena, Los Angeles Co" as received, and has never, so far as known, been compared directly with the original type of *barbaræ*, taken at Sta. Barbara, by Mr. Fuchs. It agrees very well with the original description of *barbaræ*, however, except in one particular, for it is said in the description that there are the usual dorsal punctures, which would mean two discal and widely separated and one subapical; in the specimen here referred to this is not true, there being about six punctures on each elytron, irregularly disposed in two close-set series.

There are so many homologous characters pervading *Pogonus*, *Patrobus*, *Platidius* and *Trechus*, and some closely related genera, that the course favored by LeConte and Horn, placing them all in a single subfamily Pogoninæ, would seem to me more appropriate than the division into two subfamilies, Pogoninæ and Trechinæ, now advocated in the European lists. In this subfamily Pogoninæ there are several tribal groups. *Pogonus* is very poorly represented in North America by three genera and three species—*Pogonus texanus* Chd., *Pogonistes planatus* Horn (*depressus* || Lec.) and *Diplochætus parallelus* Lec. (*lecontei* Horn). The last two are considered subgenera of *Pogonus* by some systematists, but this is not necessary or advisable, as the three groups differ among themselves very much in habitus, as well as structural characters.

IV—MISCELLANEOUS NOTES AND CORRECTIONS

CARABIDÆ

The *Selenophorus mustus*, described by me as new, from Biscayne Bay, Florida (Mem. Col. V, 1914, p. 152), is evidently the same as *excisus* Lec., which is a valid species and not a synonym of *fatuus* as maintained by Leng (Bull. Am. Mus., XXXIV, p. 597). *S. blanchardi* Manee, is not closely allied to *excisus*, but differs in its still shorter and relatively broader prothorax, smaller head and more obscure bronzy lustre, that of *excisus* being rather brilliantly subæneous; as in *excisus*, the body is much less elongate than in *fatuus*.

Celiamorphus opaculus Csy. (l. c., p. 143), has proved to be abundant at Southern Pines, North Carolina—a region peculiarly rich in the Selenophorids; it is the largest species of the genus, notably elongate, with the head somewhat variable in relative size but on the whole larger than in any other, and with the mandibles wholly black as a rule. In *ellipticus* the body is notably smaller, and the mandibles are pale testaceous, black at tip and at the outer edge basally. My series of *opaculus* consists of twenty individuals, that of *ellipticus* also of the same number, so that their divergences can be easily compared. *Currens* resembles *ellipticus* somewhat but is narrower, the prothorax more narrowed and more deeply sinuate at apex and the eyes notably larger. Of *contractus* Csy., a small species with shorter prothorax, Mr. Manee has recently sent me two additional examples; it is a rather isolated form and is not closely allied to any other.

Mr. Löding has very kindly sent me three examples of *Anisodactylus lödingi* Schf. It is very much larger than any other species and differs conspicuously in habitus, because of its very large head, notably larger in the female than in the male, with feebly convex eyes and long and less constricted neck. The anterior tarsi of the male are very broadly dilated, with extremely transverse joints. The discal puncture of the elytra, at the outer side of the second stria near four-sevenths, is as distinct as in any other species, and I am therefore at a loss to undertand the apparent oversight

of Mr. Schaeffer in stating that this puncture is wanting. The species must be regarded as the type of a separate genus near *Anisodactylus*, for which I would propose the name **Cephalogyna** (n. gen.).

The name "celax " (l. c., p. 107) will be recognized of course as a misprint for *celox;* it is given correctly in the index.

EROTYLIDÆ

If Mr. Blatchley will again examine his type of *Tritoma dissimilis* from Florida (Can. Ent., 1917, p. 140), he can better decide as to its relationship with *Pseudischyrus acuminatus* Csy. (Mem. Col., VII, 1916, p. 157), for it appears now, by an inspection of his description, that the two are probably identical.

HISTERIDÆ

A few errors, which have become apparent since my last paper (Mem. Col., VII), are corrected as follows:

Platysoma (*Cylistosoma*) *quadrifera* Csy. (l. c., p. 202), is a synonym of *parallela* Say.

Saprinus discoidalis ssp. *amplus* Csy. (l. c., p. 258), is the true *discoidalis* of LeConte. The former, as found at El Paso and in New Mexico, resembles *discoidalis* in general form and size, but is always deep black, never having the metallic lustre of *discoidalis*— described originally from southern California, has rather stronger sculpture, which however is almost similar in nature and distribution, and more strongly angulate mandibles externally. The pygidium is also more or less carinulate toward base along the median line, a character which is not suggested even vestigially in either of my two examples of *discoidalis* (*amplus* Csy). This New Mexican form may take the name *Saprinus discoidalis* ssp. **latiformis** nov., having as a synonym *S. discoidalis* Csy. nec Lec.

The two species *Saprinus repens* and *insolitus* (l. c., pp. 262, 263) belong to the genus *Chelyoxenus* of Hubbard, but differ from *C. xerobatis* Hubb., in the form of the pygidium, among other features. The peculiar and mutually very different pygidial modifications in the two species first named above, have been made known in sufficient detail under the original descriptions. In *xerobatis*, my two specimens from Crescent City, differing considerably in size, have

the pygidium mutually similar; beyond the middle it is centrally flattened in a small area, the surface thence rather rapidly sloping toward the apical parts, with a fine cariniform median line extending from the small flattened area to the apex. I do not know to what extent these singular and sharply diversified pygidial characters may be due to sex.

CERAMBYCIDÆ

The genus *Malthophia* Csy. (Mem. Col., III, p. 308), is either the same as *Idæmea* Horn or closely allied, but on comparing the male type of *M. oculata* with Mr. Fall's description of *Idæmea californica* (Occ. Papers, Cal. Acad., VIII, p. 256), which seemed at first might be identical, I find that in *oculata* the prothorax is tuberculate at the sides, well behind and not "at the middle" and the elytra are only one-half wider than the prothorax, and not "three-fourths wider." Otherwise there seems to be close agreement, except that *californica* is materially larger—13 to 16 mm.—and not 10 mm. as in *oculata*. Having become involved in a serious oversight in this matter, it is however somewhat compensating to find that, under more modern conceptions as shown in the catalogue of Aurivillius, *Idæmea*, *Methia* and other related genera should form part of the series near *Achryson*. It did not occur to me to look for *Malthophia* among the Lamiids. At all events, we have here an absolutely independent estimate of its systematic position, confirming that of Aurivillius. It is furthermore highly probable that *Malthophia*, as represented by *californica* and *oculata*, is not exactly the same generically as *Idæmea* Horn—that is judging by the development of the eyes and antennæ.

Geropa æquicollis Csy. (l. c., p. 306), is evidently a synonym of *Achryson concolor* Lec. The genus *Geropa* differs, however, from *Achryson*, as represented by *surinamum*, in some important particulars besides the straight and elongate-oval and not arcuate basal joint of the antennæ, truncate and not bisinuate thoracic base, and rounded and not spinose elytral apices; it differs very strongly in general habitus and should be regarded as valid.

Of *Pogonocherus salicicola* Csy. (Mem. Col., IV, p. 347), I have recently received a second specimen from Mr. Frost, agreeing perfectly with the type and confirming the species as amply valid and

in no sense a variety of any other. The name was misprinted "*salicola*," but, although noticing the error shortly after publication, I have neglected until the present opportunity, to change it to the correct form—*salicicola*.

It is possible that *Tetraopes vegasensis* Csy. (l. c., p. 380), may be the same as *collaris* Horn. Although an inspection of the type of the latter some time ago, at any rate shows a rather close general agreement, I could form no absolutely determinative conclusion except by having the two forms together; meanwhile it might be considered as subspecifically related to *collaris*.

Anthophilax viridis Lec., from Eagle Harbor, Lake Superior, is said to have the head and prothorax virescent, the antennæ paler toward tip and the tibiæ rufescent toward base. The form from the Adirondacks, which we have been calling *viridis*, has the head and prothorax of a subcupreous chocolate-brown and the elytra bright green as in *viridis* and similarly sculptured, but the antennæ are not paler apically in either sex, being entirely black (♂), or with the joints beyond the second entirely pale, with black tips (♀); the legs in the male are entirely black; in the female they are colored as described of *viridis*. This Adirondack form seems to be at least varietally distinct from *viridis*, and I would propose for it the name **Anthophilax viridis** ssp. **viridipennis** nov. In the Lake Superior *cyaneus* Hald., the entire upper surface is green, the antennal joints (♀) particolored, and the legs in that sex are entirely pale, with darker knees and tarsi, the elytral sculpture less dense than in *viridis* or *viridipennis;* it is apparently a valid species, differing from *malachiticus* in its larger size, stouter form and much finer and sparser terminal sculpture of the elytra.

The Lake Superior form of *Centrodera decolorata* differs from the eastern form in having more cuneiform and basally broader elytra in both sexes, and a relatively smaller and more densely punctate head. This may be seen very readily in series. The Lake Superior form may be called **Centrodera decolorata** ssp. **lacustris** nov.

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